

## APPROVAL STIPULATIONS

- 2** — The backwash water from all pool filters, pool drains and pool deck drains may discharge to an approved receptor or other approved point of disposal by means of an air break as defined in Comm 81.01(5).
- 3** — All waste must discharge in accord with Comm Table 82.38-1.
- 51** — Complete installation instructions must be provided with each unit.
- 60** — This device may only serve beverage dispensing equipment. When this device serves carbonated dispensing equipment copper pipe and/or tubing may not be used down stream of this device.
- 101** — Prior to installation of this product, plans and specifications must be submitted to the department for review and approval in accordance with s. Comm 82.20 (4) of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.
- 104** — This product must be installed downstream of a reduced pressure principle backflow preventer (ASSE 1013) or air-gap that separates the water system serving this product or water outlets used for maintaining this product, from other dissimilar products.
- 105** — A reduced pressure principle backflow preventer (ASSE 1013 or CAN/CSA B64.4) or air-gap must be installed on the water supply pipes serving this product.
- 114** — This product must be installed with a vacuum breaker conforming to ASSE standard 1001, 1014 or 1011.
- 119** — This product must be installed with the critical level of the vacuum breaker not less than six inches above the highest use of the hose tip of this product and with no positive shut off device downstream of the vacuum breaker.
- 120** — Installation of this product must include the optional anti-siphon pressure type vacuum breaker serving the bed pan washer. The anti-siphon pressure type vacuum breaker must be listed by a nationally recognized listing agency as conforming to ASSE Standard 1056. Specific plan approval from the department must be obtained for the installation of the anti-siphon pressure type vacuum breaker in health care and related facilities.
- 166** — The base model numbers for this product must be followed by the suffix X to be compatible with PEX, copper and CPVC pipe and/or tubing.
- 168** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - Bottom openings for pump and holding tanks.
  - Four inch discharge opening in riser.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp., or Fernco gasket model 44 V-405.
  - Four or six inch PVC coupling cast in the tank or cover wall for connection of inlet, outlet, observation or vent pipe.
  - TUF-TITE Round Riser System to be installed in accordance with the product approval issued to TUF-TITE.

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- 169** — This product is approved to use the following:
- Opening cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank wall.
  - "Cast-A-Seal" by Press Seal Gasket Corp.
  - Polypropylene riser and access cover by EZ Set Tank Company
- 172** — The manufacturer must keep a set of plans and specifications bearing the department's stamp of approval. The plans and specifications must be open to inspection by an authorized representative of the department.
- 173** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover.
- 174** — This product is approved to use the following:
- Bottom or Side pipe openings for pump and holding tanks.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp. and Polylok II High Pressure Pipe Seal by Polylok.
  - Opening cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 175** — This product is approved to use the following:
- Four inch opening in access cover.
- 176** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into access cover.
  - Four inch inlet in tank cover for holding tanks only.
- 178** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Neenah Foundry gasketed access cover.
  - Bilco locking hinged access cover.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual outlets at end of tank with one access opening above each outlet.
  - Side outlets for dose tanks.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six, eight and ten-inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 179** — This product may only be used as a grease interceptor if the interceptor is to discharge to a municipal sewer system and treatment facility.
- 181** — The products produced by this manufacturer are approved to use the following:
- Bolt on anodes.
  - One inch opening for electrical connections.
  - Internal support rings spaced evenly along tank.
  - Optional 6", 8", or 10" threaded plug in access cover.
  - Flip top access cover or bolt down cover with or without gasket.
  - 3" diameter suction pump extension with coupling.
  - 2" opening for vent connection.
  - 4", 6" or 8" inlet and/or outlet.
- 182** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover as an inlet for holding tank only.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 183** — The products produced by this manufacturer are approved to use the following:
- Flip top access cover or bolt down cover with or without gasket.
  - STI P-3 tank with welded on anodes.
  - Bolt on anodes.
  - 4" diameter suction pump extension with coupling.
- 184** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 185** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 186** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch inlet through cover of tank for holding
  - Four inch discharge opening in riser.
  - Six inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
  - Dual inlets and outlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 187** — This product is approved to use the following:
- Four or six inch inspection or vent openings over the inlet and/or outlet baffles.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 188** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank wall, tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 190** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank, tank cover or access cover.
  - Polylok II High Pressure Pipe Seal by Polylok.
  - One or two holes in interior wall and located at least nine inches below liquid level and 28 inches above tank bottom when tank is a two compartment septic tank.
  - One or two holes in interior wall and located near bottom when tank is a pump tank.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 191** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - One and one-half inch schedule 40 PVC cast in riser for electrical wiring.
  - Tuf-Tite Round Riser System for access openings.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 192** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four or six inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp. and Polylok II High Pressure Pipe Seal by Polylok.
  - Dual inlets at end or side of tank with access opening above each inlet baffle.
  - Four inch discharge opening in riser.
  - 2-1/2 inch threaded nipple cast in riser for electrical wiring.
  - Four, six or eight inch pipe openings located near the bottom of the side or end wall for pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 193** — This product is approved to use the following:
- Cast-A-Seal by Press Seal Gasket Corp. and A-Lok X-Cel by A-Lok Products, Inc.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover, tank wall or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Interior wall with minimum open area of 30 x 24 inches near bottom of wall for septic, holding and pump tanks.
  - Bottom and side pipe openings for pump and holding tanks.
- 194** — This product is approved to use the following:
- Four inch discharge opening in riser.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Four inch pipe opening in access cover.
- 195** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 196** — This product is approved to use the following:
- A-Lok X-Cel by A-Lok Products, Inc.
  - Bottom and side pipe openings for pump and holding tanks.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four or six-inch inlet or outlet.
  - Neenah bolted manhole cover and frame.
  - Two and 1/4 inch diameter knock out in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 198** — This product is approved to use the following:
- Four-inch discharge opening in riser.
  - Two-inch schedule 40 PVC cast in riser for electrical wiring.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Four or six-inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
- 200** — This product is approved to use the following:
- Four-inch opening located in interior wall and between a distance of 9-inches below liquid level and above 1/3 of liquid level above bottom of tank for septic tanks only.
  - Four or eight-inch opening in tank or access cover.
  - Six-inch inlet and outlet openings.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Dual 4" four inch inlets and/or outlets.
  - Four-inch discharge opening in riser.
  - Three-inch schedule 40 PVC cast in riser for electrical wiring.
  - Cast-A-Seal and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover, access cover or interior wall.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 201** — This product is approved to use the following:
- Four, six or eight inch inlet and outlet openings.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - 12-inch access port for holding tanks.
  - Four inch discharge opening in riser.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Metal lockdown cover.
  - Cast-A-Seal and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 203** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Cast-A-Seal by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Dual inlets with one access opening above both inlets.
  - Dual inlets with one access opening above each inlet.
  - Inlet(s) and outlet(s) on opposite sides of tank, inlet(s) on end or side of tank with outlet on end of tank or interior wall.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 205** — This product is approved to use the following:
- Cast-A-Seal and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter designed to be installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 206** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 207** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Two six-inch openings in the lower portion of the interior wall for holding or pump.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 208** — This product is approved to use the following:
- Cast-A-Seal by Press Seal Gasket Corp.
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with an access opening above each inlet.
  - 24" diameter Tuf-Tite risers.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Low end and side pipe openings for pump and holding tanks.

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- 209** — This product is approved to use the following:
- Four inch pipe inlet located in the edge of the tank cover.
  - Four inch discharge opening in riser.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Four inch pipe openings located near the bottom of the side or end wall for siphon, pump and holding tanks.
  - Steel locking cover for the access opening.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Eight inch threaded plugged opening in access cover.
  - Six-inch diameter opening in lower portion of the interior wall for siphon, pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 210** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Bottom and side pipe openings for pump and holding tanks.
  - Four-inch pipe connection opening in access cover.
  - Two-inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter designed to be installed in a four-inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 212** — The products produced by this manufacturer are approved to use the following:
- One-inch schedule 40 PVC cast in riser for electrical wiring.
  - Bottom openings for holding tank and for pump tank or compartment.
  - Department approved effluent filter designed installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Access opening cover with 4-inch opening.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
- 214** — This product is approved to use the following:
- 3/4" diameter opening in the access riser.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 215** — The products produced by this manufacturer are approved to use the following:
- Flip top access cover or bolt down cover with or without gasket.
  - 6", 8" or 10" threaded plug in access covers.
  - 4" vent connection in access cover.
  - Polyurethane or fiberglass coatings.
  - STI P-3 tank with welded on anodes.
  - Bolt on anodes.
  - Strap down straps with "Strap Wrap".
  - 4" diameter suction pump extension with coupling.
  - 4" or 6" diameter inlet.

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- 216** — The products produced by this manufacturer are approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into the tank cover or manhole in lieu of an observation/vent opening.
  - Optional inlet opening through tank cover using pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover for holding or pump tank use.
  - Bottom openings for holding tank and for pump tank or compartment.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - This product is approved to use Press Seal "Cast-A-Seal" mechanical adapters for all pipe connections.
  - 4" or 6" PVC Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into the inlet and outlet openings of the tank in lieu of hub cast inlet or outlet opening.
  - Dual inlets at end of tank with one access opening above both inlets.
- 217** — The products produced by this manufacturer are approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or manhole in lieu of observation/vent opening.
  - Optional inlet opening through tank cover using cast iron 90 degree ell with pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover for holding or pump tank use.
  - Bottom openings for holding tank and for pump tank or compartment.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 219** — The products produced by this manufacturer are approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or manhole in lieu of observation/vent opening.
  - Bottom pipe opening for siphon, pump and holding tanks.
  - Optional discharge opening from riser.
  - This product is approved to use Polylok II "High Pressure Seal", Press Seal "Cast-A-Seal", 4" fernco #44U-405 gasket, 4" Multi-Tite, 4" Jone-Tite SV gasket mechanical adapters for all pipe connections.
  - This product is approved to use Lead and Oakum joints for all pipe connections.
  - Tank covers may be sealed by the use of mortar or rubber butyl sealant.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

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- 220** — The products produced by this manufacturer are approved to use the following:
- Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Optional discharge opening from riser.
  - Three inch schedule 40 PVC cast in riser for electrical wiring and/or force main.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
- 224** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" .
  - Dual inlets at end of tank with an access opening above one inlet and an observation opening over the other inlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 225** — This product is approved to use a department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 227** — This product is approved to use the following:
- Side opening for when product is used as a holding tank.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
- 229** — This product is approved to use the following:
- Press Seal "Cast-A-Seal" gaskets
  - Dual or triple inlets at end of tank with one access or multiple openings above each inlet.
  - Dual or triple outlets end of tank with one access or multiple openings above each outlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Tuf-Tite manhole risers and covers.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
- 233** — This product is approved to use "Cast-A-Seal" mechanical adapters for all pipe connections.
- 241** — This product may only be installed in the outlet tee of sewage treatment compartment or tank having a flow rate of no greater than 800 gpd.

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- 242 — A 1.25" hole must be drilled in the top of the filter within an inch of the slots provide for venting prior to being installed in the outlet tee.
- 244 — This tank may only be used when installed with the Bio-Microbics Micro or High Strength Fast sewage treatment apparatus.
- 245 — The manhole cover installed above the Nibbler Jr. must be installed so that it terminates at or above grade.
- 246 — This tank must only be used in conjunction with the Nibbler Jr. sewage treatment apparatus and in accordance with the Nibbler Jr.'s product approval stipulations.
- 248 — This tank may only be used when installed with the Bio-Microbics, Inc., High Strength or Micro Fast sewage treatment apparatus.
- 250 — Prior to the installation of this product, plans and specifications must be submitted to the department for review and approval in accordance with s. Comm 82.20(4) of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.
- 251 — This tank must be designed to withstand the pressures to which it will be subjected.
- 252 — The manufacturer must keep at the manufacturing plant a set of plans and specifications bearing the department's stamp of approval. The plans and specifications must be open to inspection by an authorized representative of the department.
- 253 — The maximum daily wastewater flow, which may discharge through this product, is 500 gallons per day.
- 254 — This tank may only be installed in conjunction with the Bio-Microbics Inc., sewage treatment apparatus.
- 255 — A sedimentation tank or compartment with a minimum capacity of 350 gallons must be located up stream of the tank or compartment in which the Bio-Microbics, Inc., is installed.
- 257 — Model 560S or 660FP aerator must be used with this product.
- 259 — A minimum 2" diameter vent must be provided on the building sewer within 12" of the connection to the tank.
- 262 — This product is recognized to treat a maximum of 1.0 pound of BOD5 per day at a maximum daily wastewater flow of 500 gallons per day.
- 263 — This product must be sized based on daily wastewater flow (gallons per day). The gallons per day value must be at least 150 gallons per day per bedroom.
- 266 — This product must be installed in accordance with the manufacturer's printed instructions, the plan approval and s. Comm 83.15 (4), Wis. Admin. Code. If there is a conflict between the manufacturer's instructions and the plan approval, the plan approval and code requirements will take precedence.
- 269 — This product must have a warning label located on the cover over the settling chamber stating "DO NOT PUMP FROM THIS RISER."
- 275 — This product must be installed so as to receive the discharge from a septic tank sized in accordance with ch. Comm 83, Wis. Admin. Code.
- 279 — The maximum daily wastewater flow, which may discharge through this product, is 750 gallons per day.
- 280 — The maximum daily wastewater flow which may discharge through this product is 1000 gallons per day.
- 281 — A 1000 gallon septic tank must be installed upstream of this product.

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- 283** — The maximum daily wastewater (DWF) flow which may discharge through this product is 450 gallons per day.
- 285** — Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- 287** — The maximum daily wastewater flow which may discharge through model CA-12 is 960 gallons per day.
- 288** — The maximum daily wastewater flow which may discharge through model CA-12 DENITE is 800 gallons per day.
- 290** —
1. A copy of this approval letter must be supplied to the buyer and installer of each tank sold.
  2. All laitance, loose or foreign material must be removed from each joint surface prior to the sealant being applied.
  3. Continuous sealant meeting Federal Specification SS-S-00210-A must be applied to each tongue and groove wall joint.
  4. After placement of the concrete sections on the sealant, continuous squeeze-out of the sealant must be visible inside and outside the tank.
  5. A certified plumbing inspector must confirm compliance with limitations 2, 3 and 4 above, by direct observations during each process.
- 295** — The lower pipe opening on this product may only be used when the tank is installed as a holding tank.
- 299** — The capacity of the sedimentation tank is exempt from the minimum capacity requirements of s. Comm 83.15 (3) of the Wis. Admin. Code. This tank capacity must not be included in the septic tank capacity required by s. Comm 83.15 (3) of the Wis. Admin. Code.
- 300** — The sedimentation tank must be installed downstream of septic tanks required by s. Comm 83.15 (3) of the Wis. Admin. Code.
- 303** — All manhole covers terminating above grade must have effective locking devices.
- 306** — A manhole must be provided in the cover of the grease interceptor over the inlet and outlet baffles.
- 307** — The side openings and lower end opening on this product may only be used when this product is installed as a holding tank.
- 310** — This product may only be used as a septic tank.
- 311** — Installation and servicing of this product must be in accordance with the manufacturer's instructions. A copy of the manufacturer's installation and servicing instructions must be given to the owner of the system.
- 312** — The inlet, outlet and tees must be schedule 40 PVC conforming to ASTM standard D2665 or D1785.
- 313** — The tees must be located between the end wall of the tank and center line of the manhole on the same end of the tank.
- 314** — The tees must be installed so that they extend a minimum six inches above the liquid level, nine inches below the liquid level but not more than 1/3 below the liquid level of the tank and have at least two inches of clearance between the top of the tee and the tank.

## APPROVAL STIPULATIONS

- 315 — The manhole riser on this product must terminate below grade within six inches of finished grade.
- 316 — The manufacturer's manhole lid and eight inch pipe riser must be installed on one of the manholes to provide an inspection opening.
- 319 — This product must have a warning label located on the cover of the BIO-KINETIC system stating "WARNING DO NOT ENTER TANK. THE BIO-KINETIC SYSTEM MUST BE SERVICED FROM GRADE USING PROPER TOOLS AND EQUIPMENT. CONTACT YOUR LOCAL NORWECO DISTRIBUTOR FOR SERVICE."
- 320 — The joint used to connect the inlet pipe to this product must be caulked in accordance with s. Comm 84.40 (5) (a) and (17), of the Wis. Admin. Code.
- 328 — Model 93, 95, 780 or 860 aerator must be used with this product.
- 330 — This product may only receive waste from recreational vehicles.
- 332 — The joints between the tank cover and the inlets and outlet fittings must be made airtight.
- 333 — All tanks must be installed by either a licensed plumber or a holder of a servicing license issued pursuant to s. 146.20, Wis. Stats., and ch. NR 113, Wis. Admin. Code. All servicing and disposal of the contents from these tanks must be in accord with s. 146.20, Wis. Stats., and ch. NR 113, Wis. Admin. Code.
- 334 — The glass-fiber reinforced resin joint between the tank and cover must be of sufficient depth and width to provide a corrosion resistant barrier, and be at least as strong as the tank wall. It must be at least 7/32 inch thick and have a total overlay of at least four inches.
- 340 — When this product is installed in an interior compartment, the discharge connection must be:
  - 1. Solvent cemented to a single four inch diameter schedule 40 PVC, plastic pipe (ASTM D 2665 or ASTM D 1785) which is solvent cemented to a four inch diameter schedule 40 PVC coupling encased in the interior wall, or
  - 2. This product must be installed in accordance with the manufacturer's printed installation instructions entitled "ATTACHING A ZABEL FILTER TO A TANK WALL THAT HAS NO INTERNAL PROTRUDING EFFLUENT LINE."
- 341 — When this product is installed as an outlet baffle for an exterior compartment:
  - 1. The bell coupling on the side of the filter case must be solvent cemented to a single four inch schedule 40 PVC plastic pipe (ASTM D 2665 or ASTM D 1785) which extends through the outlet opening of the tank to a point at least three feet beyond the undisturbed ground surrounding the excavation made for the tank, or
  - 2. Be installed in accordance with the manufacturer's printed installation instructions entitled "ATTACHING A ZABEL FILTER TO A TANK THAT HAS NO INTERNAL PROTRUDING EFFLUENT LINE."

When the boss stop is required to be removed, written permission must be obtained from the tank manufacturer prior to installation of the filter.
- 342 — The maximum daily wastewater flow which may discharge through this product is 6000 gallons per day.
- 343 — The maximum daily wastewater flow that may discharge through this product is 900 gallons per day.
- 344 — The tees must be located between the end wall and the center line of the manhole on one end of the tank and between the end wall and the center line of the 10 inch observation pipe on the other end of the tank.
- 345 — This tank may only be installed in conjunction with the Bio-Microbics Inc., Single Home Fast sewage treatment apparatus.

## APPROVAL STIPULATIONS

- 346 — This product may not be installed more than 36 inches below final grade.
- 347 — A sedimentation tank or compartment with a minimum capacity of 500 gallons must be located upstream of the tank or compartment in which the Bio-Microbics unit is installed.
- 354 — The maximum daily wastewater flow which may discharge through this product is 1250 gallons per day.
- 355 — A 1250 gallon septic tank must be installed upstream of this product.
- 356 — The maximum daily wastewater flow which may discharge through this product is 1500 gallons per day.
- 357 — A 1500 gallon septic tank must be installed upstream of this product.
- 362 — This product must be installed in accordance with the manufacturer's printed instructions, product approval and the plan approval. If there is a conflict between the manufacturer's instructions and the plan approval, the plan approval will take precedence.
- 363 — Each pod of this product is recognized to treat a maximum of 0.81 pounds per day of BOD5 at a maximum daily flow of 137.5 gallons per day.
- 364 — The required air equipment for the air lift pumps must be capable of providing 5.5 to 7.5 CFM per pod at 15 inches of water. The minimum dead head pressure for the blower is 26 inches of water.
- 365 — Waste entering the tank housing this product must:
  - 1. Be pretreated by a department approved exterior grease interceptor which flow by gravity to a surge tank;  
and
  - 2. The surge tank must be a department approved tank which has a time controlled pump which evenly doses  
the treatment tank housing this product.
- 366 — Waste exiting the tank housing this product must:
  - 1. Be discharged into a department approved two compartment clarifier tank. The clarifier tank must have a  
sewage pump in the first compartment and a filtered outlet baffle in the second compartment;
  - 2. The discharge from the sewage pump in the clarifier tank must enter into the building sewer that discharges  
into the grease interceptor; and
  - 3. The effluent from the second compartment of the clarifier tank must enter a tank which receives sanitary  
waste that has been discharged from a properly sized, department approved sewage treatment tank.
- 367 — The maximum daily wastewater flow which may discharge through this product is 1500 gallons per day.
- 368 — The maximum daily wastewater flow which may discharge through this product is 3000 gallons per day.
- 369 — This tank may only be used in conjunction with the Nibbler sewage treatment apparatus and in accordance with the Nibbler's product approval stipulations.
- 370 — The manhole cover(s) must be installed so that they terminate at or above grade.
- 371 — The maximum daily wastewater flow, which may discharge through this product, is 600 gallons per day.

## APPROVAL STIPULATIONS

- 378 — When Zabel filter model A100, A300 or A1800 is installed in this tank installation must be in accordance with the filter manufacturer's printed instructions and the filter's product approval stipulations. If there is a conflict between the filter manufacturer's printed instructions and the filter's product approval stipulations, the product approval stipulations will take precedence.
- 379 — This product may only be installed in the outlet tee baffle of septic tanks or compartments that have a maximum daily flow rate of no more than 1000 gallons per day.
- 380 — An access opening of sufficient size to allow removal of the filter must be provided over the outlet tee baffle of which this product is installed. This access opening must terminate at or above grade.
- 381 — Maintenance information must be given to the owner of the tank explaining that periodic cleaning of the filter will be necessary.
- 382 — When this product is installed in an interior compartment, the discharge connection must be solvent cemented to a single four inch diameter schedule 40 PVC, plastic pipe (ASTM D-2665 or ASTM D-1785) which is solvent cemented to a four inch diameter schedule 40 PVC coupling encased in the interior wall.
- 384 — A manhole extending to grade must be provided over the filter.
- 386 — When this product is used as a grease interceptor baffle, a extension recommended by manufacturer must be installed. The bottom of the extension must extend to a point required by the Wis. Admin. Code for outlet baffles on grease interceptors.
- 395 — This product must be installed in sewage treatment tanks approved by the Department of Commerce, Division of Safety and Buildings for use with this product.
- 401 — The influent holes on the effluent filter shall be appropriately configured by the manufacturer so that the influent holes are positioned between 65% and 75% of the tank's minimum liquid level. This shall be coordinated with the manufacturer or manufacturer's representatives by submittal of appropriate tank drawings and/or dimensions.
- 402 — The discharge rate of the filter must allow sufficient flow to prevent the tank's inlet from becoming submerged.
- 403 — The sizing calculations of the pressure distribution network must include 0.5 head loss for this product.
- 404 — The maximum daily wastewater flow which may discharge through this product is 10,000 gallons per day.
- 405 — Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants with an average influent value of Total Kjeldal Nitrogen (TKN) of 37.6 mg/L, Nitrate - Nitritie (NO<sub>2</sub> NO<sub>3</sub>) 0.34 mg/L, and Ammonia (NH<sub>4</sub>) 29.3 mg/L to produce an effluent with values of Total Kjeldal Nitrogen (TKN) of 4.13 mg/L, Nitrate - Nitritie (NO<sub>2</sub> NO<sub>3</sub>) 6.6 mg/L, and Ammonia (NH<sub>4</sub>) 2.5 mg/L when this product is maintained in accordance to the manufacturer's maintenance requirements.
- 409 — This product may not be installed more than 18 inches below final grade.
- 410 — The flowing water supply pressure at the point(s) of connection must be at least 10 psig.
- 412 — The flowing water supply pressure at the point(s) of connection must be at least 12 psig.
- 414 — The flowing water supply pressure at the point(s) of connection must be at least 14 psig.
- 415 — The flowing water supply pressure at the point(s) of connection must be at least 15 psig.
- 420 — The flowing water supply pressure at the point(s) of connection must be at least 20 psig.
- 422 — The flowing water supply pressure at the point(s) of connection must be at least 22 psig.

## APPROVAL STIPULATIONS

- 423 — The flowing water supply pressure at the point(s) of connection must be at least 23 psig.
- 424 — The flowing water supply pressure at the point(s) of connection must be at least 24 psig.
- 425 — The flowing water supply pressure at the point(s) of connection must be at least 25 psig.
- 426 — The flowing water supply pressure at the point(s) of connection must be at least 26 psig.
- 427 — The flowing water supply pressure at the point(s) of connection must be at least 27 psig.
- 428 — The flowing water supply pressure at the point(s) of connection must be at least 28 psig.
- 429 — The flowing water supply pressure at the point(s) of connection must be at least 29 psig.
- 430 — The flowing water supply pressure at the point(s) of connection must be at least 30 psig.
- 431 — The flowing water supply pressure at the point(s) of connection must be at least 31 psig.
- 432 — The flowing water supply pressure at the point(s) of connection must be at least 32 psig.
- 433 — The flowing water supply pressure at the point(s) of connection must be at least 33 psig.
- 434 — The flowing water supply pressure at the point(s) of connection must be at least 34 psig.
- 435 — The flowing water supply pressure at the point(s) of connection must be at least 35 psig.
- 436 — The flowing water supply pressure at the point(s) of connection must be at least 36 psig.
- 437 — The flowing water supply pressure at the point(s) of connection must be at least 37 psig.
- 438 — The flowing water supply pressure at the point(s) of connection must be at least 38 psig.
- 439 — The flowing water supply pressure at the point(s) of connection must be at least 39 psig.
- 440 — The flowing water supply pressure at the point(s) of connection must be at least 40 psig.
- 441 — The flowing water supply pressure at the point(s) of connection must be at least 41 psig.
- 442 — The flowing water supply pressure at the point(s) of connection must be at least 42 psig.
- 443 — The flowing water supply pressure at the point(s) of connection must be at least 43 psig.
- 444 — The flowing water supply pressure at the point(s) of connection must be at least 44 psig.
- 445 — The flowing water supply pressure at the point(s) of connection must be at least 45 psig.
- 446 — The flowing water supply pressure at the point(s) of connection must be at least 46 psig.
- 447 — The flowing water supply pressure at the point(s) of connection must be at least 47 psig.
- 448 — The flowing water supply pressure at the point(s) of connection must be at least 48 psig.
- 449 — The flowing water supply pressure at the point(s) of connection must be at least 49 psig.
- 450 — The flowing water supply pressure at the point(s) of connection must be at least 50 psig.
- 451 — The manufacturer must keep at the manufacturing plant a set of plans and specifications bearing the department's stamp of approval. The plans and specifications must be open to inspection by an authorized representative of the department.
- 452 — This plumbing product must be installed in accordance with Cardinal Industries, Inc. Plumbing Standards and Installation Procedures manual, revised 1/30/87.
- 453 — The septic tank must be installed a minimum of eight but not more than thirty inches below final grade.
- 461 — The shower valve must be served by a thermostatic mixing valve or be a pressure balancing valve when this model is installed in a public building.

## APPROVAL STIPULATIONS

- 466 — The water heater relief valve must discharge in accordance with s. Comm 82.40 (5) (d), Wis. Admin. Code.
- 467 — The shower and tub/shower valve must be of the individually pressure balanced or individually thermostatically blended type.
- 469 — The manhole cover must be secured to the riser using screws which are not standard or phillips head to be considered an effective locking device.
- 470 — Joints between riser sections shall be seal with butyl mastic sealant and secured with a minimum of four screws.
- 471 — All floor drains or other similar fixtures shall be installed with safing material extending a minimum of 12 inches from the fixture. The safing material shall conform to s. Comm 84.30 (6), Wis. Adm. Code, and be properly drained.
- 472 — The joint between the adapter ring shall be secured to the tank cover with a minimum of six screws and sealed with oxime silicone caulk or butyl mastic sealant.
- 473 — The maximum water supply fixture units (wsfu) on CPVC tubing must not exceed 24 wsfu for 1-inch tubing, 13 wsfu for 3/4-inch tubing and 5 wsfu for 1/2-inch tubing.
- 474 — The flowing water supply pressure at the point(s) of connection must be at least equal to 25 psig for water closets and 8 psig for outlets of all other fixtures supplies or the pressure required by the fixture manufacturer, whichever is greater.
- 475 — The maximum water supply fixture units (wsfu) on PEX tubing must not exceed 20.5 wsfu for 1-inch tubing, 11 wsfu for 3/4-inch tubing, 8 wsfu for 5/8-inch tubing, and 4 wsfu for 1/2-inch tubing.
- 476 — The maximum water supply fixture units (wsfu) on CPVC tubing must not exceed 23 wsfu for 1-inch tubing, 10 wsfu for 3/4-inch tubing and 3 wsfu for 1/2-inch tubing.
- 477 — The maximum water supply fixture units (wsfu) on polybutylene tubing must not exceed 24.0 wsfu for 1-inch tubing, 13.0 wsfu for 3/4-inch tubing and 5 wsfu for 1/2-inch tubing.
- 478 — The maximum water supply fixture units (wsfu) on Type M copper tubing must not exceed 34.0 wsfu for 1-inch tubing, 18.0 wsfu for 3/4-inch tubing and 7.5 wsfu for 1/2-inch tubing.
- 479 — The maximum water supply fixture units (wsfu) on galvanized steel piping must not exceed 33.0 wsfu for 1-inch piping, 18.5 wsfu for 3/4-inch piping and 9.5 wsfu for 1/2-inch piping.
- 480 — The maximum water supply fixture units (wsfu) on Type L copper tubing must not exceed 31.0 wsfu for 1-inch tubing, 16.5 wsfu for 3/4-inch tubing and 6.5 wsfu for 1/2-inch tubing.
- 481 — If the developed length of hot water distribution piping from the source of the hot water supply to a plumbing fixture or appliance exceeds 100 feet, a circulation system or self-regulating electric heating cable shall be provided to maintain the temperature of the hot water within the distribution piping in accordance with s. Comm 82.40 (5)(b) of the Wisconsin Administrative Code.
- 482 — A vent conforming with s. Comm 82.31 of the Wisconsin Admin. Code, must be installed to serve the water closet in the bathroom located between the two bedrooms.
- 503 — Wash fountains which have more than seven stations may not be operated by non-sectional controls.
- 504 — Wash fountains installed in public toilet rooms must have the metering Air-trol valves adjusted to allow a maximum of one gallon of water to be discharged after the valve is activated.
- 506 — This product must be installed with the Amarilis vacuum breaker kit model 28708.0020A, 28708.0200A, 28708.0210A, 28708.0940A or 28708.0990in accordance with the installation instructions of the vacuum breaker.

## APPROVAL STIPULATIONS

- 507 — If the formulation of this approved septic tank additive is modified, or additional assertions of function or performance are made, then this approval shall be rendered null and void, unless the change is submitted to this department for review and the approval reaffirmed.
- 601 — This product has undergone sufficient testing to document the product's ability to reduce only those contaminants and/or substances as specified in this approval letter when the product is installed and maintained in strict accordance with the manufacturers published instructions.
- 602 — Where the Department of Natural Resources (DNR) has jurisdiction, a written approval may be required prior to installation of this product in a water supply system to reduce the concentration of a contaminant that exceeds the primary drinking water standards contained in ch. NR 809, Wis. Admin. Code, the enforcement standards contained in ch. NR 140, Wis. Admin. Code, or for a water supply system that is subject to a written advisory opinion by the DNR. For more information contact the DNR Section of Private Water Systems, P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.
- 603 — A device used to detect increases in the total dissolved solids concentration must be installed on the product water line.
- 607 — A backflow preventer with intermediate atmospheric vent (ASSE 1012) or a reduced pressure principle backflow preventer (ASSE 1013) must be installed in the water supply serving this product.
- 611 — The pressure of the water supply to this plumbing product must be at least 55 psig.
- 616 — This device may only be used or installed pursuant to Wisconsin Department of Natural Resources order WD-94-13 or to the stipulation in St. Croix County case #94-CV-479 or with the express written permission of Nor-Lake Incorporated.
- 617 — These devices must be installed with a 254 nanometer wavelength narrow band ultra violet monitor. The monitor must energize the normally closed inlet solenoid at a minimum ultra violet dosage of 38,000 microwatt-seconds per square centimeter at a wavelength of 254 nanometers.
- 618 — If these devices are used for the treatment of surface waters, or groundwaters affected by surface waters, then pre-filters approved by this department for cyst reduction must be installed upstream of these devices.
- 619 — These devices must be installed with automatic fixed flow rate controls that prevent flow above the manufacturer's maximum rated flow over the operating pressure range recommended by the manufacturer. The flow controls must be installed on the outlets of these devices.
- 620 — The normally open solenoid valves must be installed on the inlets of these devices.
- 621 — These devices must be installed with ultra violet intensity monitors that energizes audible alarms at ultra violet dosages of less than or equal to 30 millijoules per square centimeter at a wavelength of 254 nanometers.
- 624 — The use of this system must conform to all applicable United States Food and Drug Administration (USFDA), Wisconsin Department of Agriculture, Trade and Consumer Protection (DATCP) and other governing regulatory agency requirements.
- 625 — Only CalciQuest-Dry ST blended polyphosphate, listed under NSF International Standard 60, can be used with this product.
- 626 — The maximum concentration of CalciQuest-Dry ST in the treated water downstream of these devices must not exceed 10.0 mg/L.

## APPROVAL STIPULATIONS

- 627** — The black and/or white 1/2 inch and 1 inch PVC tubing may be installed for the following water uses:
- a. Overhead inter-misting head water distribution piping above ground cold only
  - b. Below flood level rim of case, inter-misting head water distribution piping above ground cold only
- 628** — The black and/or white 1/2 inch and 1 inch PVC tubing used in this system must be labeled with the KES Science & Technology logo, KES company name or the actual tubing manufacturers name, nominal tubing size, pressure rating and the statement "for cold water supplies only". In addition, all tubing must conform to NSF Standard 51 for aqueous food or NSF Standard 61 for potable water contact.
- 629** — This product must be installed and joints made in accordance with the manufacturer's published instructions (i.e. KES\_Edge\_Quick\_Connect\_Manual\_2.cdr 05/09/03).
- 630** — This product does not replace the need for a regular program of inspection and maintenance, including having the treatment tank pumped out whenever the sludge and scum occupies one-third of the tank's liquid capacity.
- 634** — Approved for the reduction of pentavalent arsenic (As+5) up to the maximum tested influent concentration of 300 +/- 30 ug/L (ppb). Arsenic reduction performance was verified by testing conducted in accordance with NSF Standard 58.

### SPECIAL INSTALLATION NOTE:

Trivalent arsenic (As+3), if present in the raw water, must be converted to pentavalent arsenic (As+5) prior to being treated; otherwise acceptable arsenic reduction may not occur. A minimum one minute of contact time with a detectable free chlorine residual, at the inlet to the device, is a proven method for achieving virtually complete conversion of As+3 to As+5.

Lab analysis for total arsenic will not differentiate between trivalent and pentavalent arsenic; "speciation" analysis of a water sample is required to determine the respective concentrations of the two forms of arsenic.

- 635** — If this approved device is modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- 636** — If these approved devices are modified or additional assertions of function or performance are made, then this approval shall be considered null and void, unless the change is submitted to the department for review and the approval is reaffirmed.
- 651** — This product does not replace the need for a regular program of inspection and maintenance. This includes having the tank pumped out when the volume of sludge and/or scum occupies one-third of the tanks liquid capacity.
- 652** — Based on information supplied by the manufacturer and reviewed by this department, the approval for this product recognizes this septic tank additive will not adversely affect the user, the bacterial action in septic systems, the soil hydraulic conductivity in soil absorption areas, or groundwater quality, when used in accordance with the manufacturers instructions.

## APPROVAL STIPULATIONS

- 657** — The Wisconsin Department of Commerce does not approve, or acknowledge the significance of, "Pi Water" nor any water treatment function performed by the magnetic treatment component of this device in the context of this plumbing product approval.
- 658** — The following promotional materials cannot be distributed, or otherwise used in Wisconsin, until the revised versions of the materials have been submitted, reviewed and approved for use by the Wisconsin Department of Commerce:
1. The printed promotional material entitled "PiMag: the water of life A technology new to North America can change the way we think about our most basic commodity"; and
  2. The video presentation entitled "PiMag TECHNOLOGY WORKSHOP".
- 659** — These devices are approved for the reduction of dissolved hydrogen sulfide, dissolved iron and dissolved manganese only.
- These devices are not approved for the reduction of particulate, bacterial or organically bound forms of hydrogen sulfide, iron or manganese.
- 660** — The system shall be provided with an in-line total dissolved solids (TDS) monitor, or other acceptable means, to warn the user when the system is not performing it's functions. Acceptable alternatives to an in-line TDS monitor include:
1. terminating the discharge of treated water;
  2. sounding an alarm which is connected to acceptable power source;
  3. flashing a light connected to an acceptable power source;
  4. providing the user with an obvious, readily interpretable, indication of the system's ability to perform  
(e.g. decreasing the flow rate of treated water by 50% or more for systems making mechanical filtration claims;
  5. Providing a sampling service by the manufacturer, either directly or through an authorized dealer, a minimum of once every six months;
  6. Providing a sampling kit for analysis of TDS or other appropriate contaminants; or
  7. Providing a TDS monitor to measure the product water quality.
- Whichever means of performance verification is selected, it shall be clearly described in the owner's manual for this device, and approved for use along with the device.
- 661** — This device is not approved for the disinfection of microbiologically unsafe water.
- This device is approved for the supplemental treatment of treated and disinfected public drinking water or other drinking water that has been tested and deemed acceptable for human consumption by the state or local health agency having jurisdiction. This device is approved for the reduction of naturally occurring nonpathogenic or nuisance microorganisms only.

## APPROVAL STIPULATIONS

- 662** — The flow through the water treatment device is determined using Table 1 of this approval to calculate the rated pressure loss through water treatment devices to be used within the water calculation worksheet [i.e. SBD-6479 (R. 8/02)] on line "F" (i.e. pressure loss due to a water treatment devices, etc...) which is included in the equation to calculate an "A" value (pressure available for uniform loss).
- 663** — Any promotional materials (written, audio or video presentations) generated for use with these devices, by Vortech International or any of it's authorized distributors, must be submitted for review and approval by this department prior to distribution in Wisconsin.
- 664** — Table 1 of this approval may be used for sizing water treatment devices up to a maximum water supply fixture unit (WSFU) value of 40. Table 1 is not required to be used when sizing small water treatment devices serving one or two fixtures.
- 665** — The maximum rated service flow rate(s) of a water treatment device, or multiple water treatment devices, installed in parallel shall be greater than or equal to the flow rate derived by using this Table 1 of this approval.
- 666** — The installation and use of these devices shall conform to the most current version of the document entitled "DNR Criteria for Ultraviolet (UV) Water Treatment Systems For Private and Non-Community Public Water Supplies to Control Microbiological Contamination".
- 667** — This approval may only be used when sizing a water treatment device(s) serving an individual dwelling.
- 668** — The flow rate derived using this approval shall not be less than the minimum flow rate or flow rate that corresponds to a pressure required by the fixture manufacturer of any fixture served by the water treatment device.
- 669** — A water treatment device serving hose bibbs or hydrants shall be sized in accordance with "a" through "c":
- a. Water supply fixture unit values of hose bibbs and hydrants being served shall be converted to gallons per minute using Table 82.40-3.
  - b. Water supply fixture units of other fixtures being served shall be converted to gallons per minute using the Table 1 contained within this approval letter.
  - c. The sum of the gallons per minute flow rates determined in "a" and "b" is considered the flow rate through the water treatment device.
- 681** — Water treatment compounds introduced into the water supply system by these devices shall be listed as an acceptable drinking water additive by a listing agency approved by this department. Listing agencies approved by this department shall include:
- a. United States Environmental Protection Agency;
  - b. United States Food and Drug Administration; and
  - c. NSF International
- 682** — A water supply system shall be protected from backflow when unlisted water treatment compounds, which may affect the potability of the water, are introduced into the system. This department shall determine the method of backflow protection. Water supply outlets for human use or consumption may not be installed downstream of the introduction of an unlisted water treatment compound.

## APPROVAL STIPULATIONS

- 690 — These products have undergone sufficient testing to document their ability to properly inject a chemical into a water supply system as specified in this approval letter.
- 692 — Only dry calcium hypochlorite pellets, Environmental Protection Agency Registration number 50510-1, weighing 0.8 gram, with a minimum of 70% free available chlorine, may be used with this product.
- 693 — Only dry chlorine pellets, Environmental Protection Agency Registration number 53026-1, weighing one gram, may be used with this product.
- 694 — Only dry chlorine pellets, Environmental Protection Agency Registration number 50510-1, weighing 0.79 grams, may be used with this product.
- 695 — This approval letter recognizes that this product will inject air into the water supply system.
- 696 — Only Land Products Dry Chlorine Pellets, Environmental Protection Agency Registration number 50510-1, weighing one gram, may be used with this product.
- 698 — This product has undergone sufficient testing to document the product's ability to properly inject a chemical into a water supply system as specified in this approval letter.
- 699 — For buildings not served by a municipal water supply, Department of Natural Resources (DNR) written approval may be required prior to installation of this product to inject a chemical into a water supply system. For more information contact the DNR Private Water Systems Section , P.O. Box 7921, Madison, WI 53707, telephone (608) 266-3415.
- 716 — This product must conform to American Association of State Highway and Transportation Officials (AASHTO) standard M36/M 36M-90.
- 717 — The product must conform to ASTM Standard F492.
- 719 — This product must conform to Standards Institution of Israel (SII) specification SII Specification 194.
- 766 — The black PVC tubing may be installed for the following water use:
  - a. Overhead inter-misting head water distribution piping. . . . aboveground cold only
- 767 — The black PVC tubing used in this system must be labeled with the Corrigan Company logo, nominal tubing size, pressure rating and the statement "for cold water supplies only." Also, the tubing must conform to NSF Standard 51 for aqueous food or NSF Standard 61 for potable water contact.
- 773 — This product may be used on PVC water service and DWV pipe without primer.
- 780 — This product must be installed and joints made in accordance with the manufacturer's published instructions.
- 782 — Horizontal pipe installed aboveground must be supported at distances not to exceed six feet. Vertical pipe must be supported at distances not to exceed 15 feet.
- 783 — Written plan approval must be obtained from the department prior to installation of this product in any private sewage system not constructed in accordance with s. Comm 83.13, Wis. Admin. Code entitled "Installation - conventional soil absorption systems."
- 784 — This product must be installed in accordance with the manufacturer's published installation instructions.
- 790 — This product may only be used on temperature and pressure relief valves with a 100,000 BTU/HR rating or less.
- 791 — This product must be installed in the vertical position.
- 793 — The fittings must be labeled with the manufacturer's name or trade mark and size.

## APPROVAL STIPULATIONS

- 794** — The pipe must be labeled with Orion (PIPE SIZE) Sch. 80, Whiteline PP, Type I, ASTM standard D4101.
- 801** — Maximum of four (4) faucets may only be served on one set of shut off valves.
- 806** — The pipe must have 2 rows, and only 2 rows, of perforations parallel to the axis of the pipe and 120 degrees, plus or minus 5 degrees apart. The perforations must be located at the nominal 4 and 8 o'clock positions when the pipe is installed.
- 808** — This product may only be installed for perforated effluent distribution piping for nonpressurized soil treatment or dispersal component.
- 810** — This product may only be used on temperature and pressure relief valves with a 105,000 BTU/HR rating or less.
- 811** — This product must be labeled with pipe size, FREEDOM FPI 12454-B SDR 35 TYPE PSM PVC SEWER PIPE ASTM D-3034.
- 836** — This product must be installed with a S.C. Johnson & Son, Inc., Flo-Thru device permanently connected to the inlet of the hose serving this product when this product is not served by a separate water supply connection.
- 837** — This product must be installed with a Hydro Systems Co., model 195 vented T connection fitting permanently connected to the inlet of the hose serving this product when the product is not served by a separate water supply connection.
- 838** — This product must be installed with a non-valve "Y" connector with one outlet of the connector permanently connected to the inlet hose serving this product and the other outlet of the connector permanently capped with a cap having a 0.078 diameter hole when this product is not served by a separate water supply connection.
- 846** — This product must be installed with part number 92018480/ sidekick fitting permanently attached to the inlet of the supply tubing serving this product when this product is connected to a faucet outlet being protected by a cross-connection control device that is not recognized to be installed under continuous pressure conditions.
- 847** — This product must be installed in accordance with the manufacturer's written instructions and ch. Comm 82, Wis. Admin. Code. If there is a conflict between the manufacturer's written instructions and the code requirements, the code requirements shall take precedence.
- 856** — The joint must be brazed using either Copper-Phos Rod (BCup-2), SIL-FOS or ASTM equivalent.
- 857** — The joint is approved for use in aboveground venting systems utilizing types K, L, M or DWV copper only.
- 858** — The joint is approved for use in aboveground water supply systems utilizing types K, L or M copper.
- 859** — This product must be lapped a minimum of six inches at all joints in the fabric.
- 862** — This product must be installed in accordance with the manufacturer's printed instructions, the plan approval, and ch. Comm 83, Wis. Admin. Code, system sizing criteria. If there is a conflict between the manufacturer's instructions and the plan approval, the plan approval, product approval and code requirements will take precedence.
- 866** — This product must be installed and maintained in accordance with the manufacturer's instructions.
- 879** — This plumbing product, when used as a water hammer arrestor serving fixtures or appliances with solenoid actuated quick closing valves, may only serve individual fixtures or appliances with 3/8 inch or smaller solenoid valves.

## APPROVAL STIPULATIONS

- 881** — This product may only be used as a fixture supply connector installed in accordance with s. Comm 82.40 (7) (h), Wis. Admin. Code.
- 887** — This product may only be installed in aboveground water supply piping.
- 889** — This product may only be installed in a plumbing system which discharges to a public sewer system.
- 891** — This product must be installed in conformance with s. Comm 82.41, Wis. Admin. Code.
- 896** — This product must be installed in an accessible ventilated area.
- 899** — This product may only be installed in accessible areas.

# APPROVAL STIPULATIONS

918	—	Pipe Diameter (in.)														
		1/2			3/4			1			1 1/4			1 3/4		
		2			2 1/2			3			3 1/2			4		
		WSFU			WSFU			WSFU			WSFU			WSFU		
		Length	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT	GPM	FM
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## APPROVAL STIPULATIONS

GPM = gallons per minute

WSFU = water supply fixture units

FM = predominately flushometer type water closets or siphon jet urinals

FT = predominately flush tank type water closets or washdown urinals

NP = not permitted, velocity exceeds 10 feet per second

Note 1: round the calculated pressure loss due to friction to the next higher number shown.

Note 2: Comm 82.40(7)(f) and 82.40(7)(g) specifies the minimum sizes for water distribution piping.

- 919** — These pipe products must conform to ASTM Standard D2846 and/or CSA Standard B137.6.

The fittings used with these pipe products must conform to ASTM F437 and/or ASTM F438 and/or ASTM F439

- 920** — These pipe products must be labeled with the following minimum information at intervals not to exceed 5.0 ft.:

1. The manufacturer's name or registered trademark;
2. The standard designation (i.e. ASTM 2846 and/or CSA B137.6);
3. The seal or mark of the certifying agency, for potable water applications the designation "pw" must also appear along with the seal or mark of the certifying agency;
4. The material designation (i.e. CPVC 4120);
5. The pressure rating at 180 degrees Fahrenheit; and
6. The nominal pipe size.

The fittings used with these pipe products must be labeled with the following minimum information:

- a. The manufacturer's name or registered trademark;
- b. The seal or mark of the certifying agency, for potable water applications the designation "pw" must also appear along with the seal or mark of the certifying agency;
- c. The standard designation (i.e. ASTM 2846 and/or CSA B137.6); and
- d. The material designation (i.e. CPVC 4120).

- 921** — These pipe products may be installed for the following water uses:

1. Water distribution piping.

- 922** — The water velocity through these piping products may not exceed 10 feet per second (fps).

## APPROVAL STIPULATIONS

- 923** — Approval is issued for these piping products because the design of these piping products meet with the intent of s. Comm 82.40 (7) (e) of the Wis. Adm. Code that limits the maximum velocity of water within the water distribution system to 8.0 feet per second (fps). The intent of the code is met because these piping products are stable at an increased velocity of 10.0 fps.
- 924** — The calculated load on any portion of a water distribution system constructed of these piping products may not exceed the limits specified in Table 1 of 1 displayed on page 2 of 3 of this letter.
- 960** — The drain line or water supply tubing installed in the horizontal direction must have continuous support; drain line or water supply tubing installed in the vertical direction must be supported every 4 feet. The drain line or water supply tubing must be Kuri Tec K3150 series RF or Kuri Tec K3130 series BF.
- 961** — The water supply tubing is for cold water use only.
- 962** — The sump discharge pump must be installed so that the total dynamic head pressure does not exceed 20 feet.
- 963** — The pipe must be labeled with "IPEX ENPURE, 1 1/4" (size), SCH. 80, Natural Polypro Type II [ASTM D4101], Lot# 7700-B-[20604095421] (lot numbers vary), CW, Made in the USA".
- 964** — The fittings must be labeled (sticker) with IPEX computer part number, IPEX reference number, description of fitting, "polypropylene" and IPEX internal code number.
- 965** — The joints between these pipes and fittings must be made using heat fusion method.
- 966** — The maximum operating pressures for these pipes and fittings are:
1. 1/2"- 2.0" pipe, 150 psig @ 73 F
  2. 2 1/2"- 4.0" pipe, 115 psig @ 73 F
- 969** — This product may be installed for the following water use(s):
- a. Water service pipe
  - b. Cold water distribution piping . . . . . Above ground
  - c. Cold water distribution piping . . . . . Underground
- 970** — This product may only be installed for the following drain or vent use(s):
- a. Effluent piping . . . . . pressurized non-perforated
  - b. Effluent piping . . . . . pressurized perforated
- 971** — The drain line tubing installed in the horizontal direction must have continuous support; drain line tubing installed in the vertical direction must be supported every 4 feet.
- 972** — The sump discharge pump must be installed so that the total dynamic head pressure does not exceed 32 feet.
- 974** — This product may only be installed in exposed areas.
- 975** — This product may be installed for the following water use(s):
- a. Fixture supply connector . . . . . Aboveground
  - b. Water distribution piping . . . . . Aboveground
- 976** — This product must be installed in an accessible location.
- 977** — This product must be installed in an area not subject to freezing.
- 978** — This product may only serve a vent three inches in diameter or less.
- 979** — This product may be installed for the following water use(s):
- a. Cold water distribution piping . . . . . Aboveground

## APPROVAL STIPULATIONS

- 980** — This product may be installed for the following use(s)  
a. Water distribution piping . . . . . aboveground  
b. Water distribution piping . . . . . belowground  
c. Water service pipe
- 984** — This product may be installed for the following water use(s):  
a. Turf sprinkler piping . . . . . underground  
b. Water service and private water main
- 987** — This product may be installed for the following drain and vent use(s):  
a. Drain piping . . . . . Pressurized
- 988** — This product may be installed for the following drain and vent use(s):  
a. Storm sewer . . . . . gravity flow
- 991** — This product may be installed for the following drain or vent use(s):  
a. Effluent piping . . . . . gravity flow perforated  
b. Subsoil drain piping . . . . . gravity flow
- 992** — This product may be installed for the following drain or vent use(s):  
a. Sanitary sewer . . . . . gravity flow  
b. Storm sewer . . . . . gravity flow
- 995** — This product may be installed for the following drain or vent use(s):  
a. Effluent piping . . . . . gravity flow non-perforated  
b. Sanitary drain and vent piping . . gravity flow underground  
c. Sanitary sewer . . . . . gravity flow  
d. Storm drain and vent piping . . . gravity flow underground  
e. Storm sewer . . . . . gravity flow
- 998** — This product may be installed for the following drain or vent use(s):  
a. Effluent piping . . . . . gravity flow non-perforated  
b. Effluent piping . . . . . gravity flow perforated  
c. Sanitary drain and vent piping . . gravity flow aboveground  
d. Sanitary drain and vent piping . . gravity flow underground  
e. Sanitary sewer . . . . . gravity flow  
f. Storm drain and vent piping . . . gravity flow aboveground  
g. Storm drain and vent piping . . . gravity flow underground  
h. Storm sewer . . . . . gravity flow  
i. Subsoil drain piping . . . . . gravity flow
- 999** — This product may be installed for the following drain or vent use(s):  
a. Drain piping . . . . . pressurized  
b. Effluent piping . . . . . gravity flow non-perforated  
c. Effluent piping . . . . . gravity flow perforated  
d. Sanitary drain and vent piping . . gravity flow aboveground  
e. Sanitary drain and vent piping . . gravity flow underground  
f. Sanitary sewer . . . . . gravity flow  
g. Storm drain and vent piping . . . gravity flow aboveground  
h. Storm drain and vent piping . . . gravity flow underground  
i. Storm sewer . . . . . gravity flow  
j. Subsoil drain piping . . . . . gravity flow
- 1001** — Any revisions to the 1990 manual require a revision approval prior to use under this approval.
- 1009** — The maximum daily wastewater flow which may discharge through this product is 12,000 gallons per day.
- 1010** — The maximum daily wastewater flow, which may discharge through this product, is 3,000 gallons per day.

## APPROVAL STIPULATIONS

- 1012** — This product consist of two multi-compartment tanks, to be utilized in the design of a split bed recirculating sand filter component for private onsite wastewater treatment system. One tank includes a septic/recirculation chamber, a sand filter dose chamber and an effluent dose chamber. The other tank includes a recirculation side chamber and an effluent side chamber for the sand filter tank. The internal components of the tanks are not included in this approval.
- 1013** — Design of the POWTS system utilizing this product must conform to the Split Bed Recirculating Sand Filter System Component Manual for Private Onsite Wastewater Treatment Systems published on June 11, 1999, by Dept. of Commerce.
- 1014** — The maximum daily wastewater flow which may discharge through this product is 300 gallons per day.
- 1015** — The maximum daily wastewater flow which may discharge through this product is 375 gallons per day.
- 1016** — This product consist of three tanks, to be utilized in the design of a split bed recirculating sand filter component for private onsite wastewater treatment system. One is a 1000 gallon primary septic/recirculation tank. Another tank includes a secondary septic/recirculation chamber, a sand filter dose chamber and an effluent dose chamber. The other tank includes a recirculation side chamber and an effluent side chamber for the sand filter tank. The internal components of the tanks are not included in this approval.
- 1017** — This product must be labeled with ASTM F 667 and AASHTO M-294.
- 1018** — This product must receive influent that has a maximum particle size of 1/8 inch.
- 1028** — The electrical connections shall conform to Comm 16, Wis. Adm. Code and they shall be located outside of the wastewater treatment tank that this product is installed in.
- 1029** — The maximum daily wastewater flow, which may discharge through this product, is 2000 gallons per day.
- 1030** — This product may connect to the hot water fixture supply serving the washing machine, which receives the detergent from this product.
- 1032** — When the product is utilized as a treatment/dose tank the following limits are required:
  - A. The maximum daily wastewater flow which may discharge through this product is 500 gallons per day.
  - B. The maximum number of doses per day is four.
  - C. The maximum volume of a single dose is 125 gallons.
  - D. The dose pump shall not exceed 1/3 HP, have a run time between 8 and 30 minutes, and comply with the system design.
- 1035** — The flowing water pressure at the point(s) of connection must be at least 39 psi for M2836 2 1 STD and M2836 2 1 B STD; 46 psi for M2836 2 1 2CGF STD and M2836 2 1 2CGF B STD; and 44 psi for M2858 2 1 2CGE STD and M2858 2 1 2CGE B STD
- 1041** — This approval is for only the prefabricated plumbing system as defined herein. "Prefabricated Plumbing" means concealed drain piping, vent piping or water supply piping or a combination of these types of piping, contained in a modular building component, which will not be visible for inspection when delivered to the final site of installation.
- 1046** — The flowing water pressure at the point(s) of connection must be at least 47 psi for M2860 3 2 STD; 32 psi for M2860 3 2 B STD; 40 psi for M2860 3 2 D STD and M2860 3 2 D B STD; 49 psi for M2860 3 2 SB RK D STD and M2860 3 2 SB RK D B STD; and 43 psi for M2860 3 2 SB FK STD and M2860 3 2 SB FK B STD.
- 1049** — Approval is issued for this product because the design of the product meets the intent of s. Comm 84.20 (6) (a), Wis. Adm. Code that requires faucets to meet ANSI standard A112.18.1M. The intent is met since this product is designed and constructed to produce a faucet for it's intended use that is equal to the requirements of the standard.

## APPROVAL STIPULATIONS

- 1051** — The maximum daily wastewater flow which may discharge through this product is 20,000 gallons per day.
- 1052** — The final grade around this product must be graded to divert surface water around this product.
- 1055** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.34 (5) (a)2., Wis. Adm. Code that requires exterior grease interceptors for systems that discharge to POWTS. The intent of the code is met since this product provides treatment of FOG that meets the performance requirements of code acceptable methods.
- 1056** — The installation of this product must include a solids interceptor, vent and running trap located up stream and as close to the source as possible and a vent located within the distance specified in Table 82.31-1, Wis. Adm. Code, on the downstream side of the product.
- 1057** — Sizing of this product must be in accordance with Jay R. Smith Remediator sizing procedures specified on their published document # PM 1040.
- 1058** — The maximum daily wastewater flow which may discharge through this product is 4500 gallons per day.
- 1062** — The maximum daily wastewater flow which may discharge through this product is 9000 gallons per day.
- 1064** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.41 (3) (a)1, Wis. Adm. Code that requires potable water supplies protected against contamination due to backflow. The intent of the code is met since this product provides an acceptable means of backflow protection.
- 1065** — Approval is issued for this product because the design of the product meets the intent of s. Comm 84.30 and 84.40, Wis. Adm. Code that requires piping materials to be suitable for such use and have watertight joints. The intent of the code is met since this product provides an acceptable material and joints for gravity flow sanitary and storm sewer pipe.
- 1070** — Approval is issued for this/these product(s) because the design of the product(s) meets the intent of s. Comm 82.40 (5)(d)2., Wis. Adm. Code that requires pressurized non-storage type water heaters to be provided with a pressure relief valve. The intent of the code is met since this/these product(s) provides an acceptable means of shutting down the heating element of the product when excessive pressures exist.
- 1071** — This product will prevent solids with a size greater than 1/16" in size from passing.
- 1072** — Approval is issued for this product because the design of the product meets the intent of s. Comm 83.15 (2) (f), Wis. Adm. Code that requires septic tank baffles be open-end coated sanitary tees or baffles made of approved materials. The intent of the code is met since this product provides an acceptable means of retaining scum in the tank while allowing flow of effluent through the tank.
- 1073** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.40 (5) (d) 5.a., Wis. Adm. Code that requires relief valve discharge piping to be made of material acceptable for water distribution piping. The intent of the code is met since this product provides a safe means of discharging water from a water heater relief valve.
- 1074** — A tank with a minimum capacity of 500 gallons must be located upstream of this product whenever two Bio-Microbics 0.9 Microfast units or 1.0 High Strength Fast units are installed in this product.
- 1075** — This tank may only be used in conjunction with the Bio-Microbics Inc., Sing Home Fast 0.9 and 1.5 units and High Strength Fast 1.0 and 1.5 units.

## APPROVAL STIPULATIONS

- 1084** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.41 (3) (a) and (d), Wis. Adm. Code that requires potable water supplies protected against contamination due to use of toxic chemicals in a single wall heat exchanger. The intent of the code is met since this product provides an acceptable means of protection for the potable water system.

## APPROVAL STIPULATIONS

- 1085** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 31 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 75-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 450 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 350 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 800 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 25 inches by 54 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 47-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 420 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 540 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 square inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 540 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 420 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 960 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 420 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 540 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 540 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 420 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 960 gallons.

## APPROVAL STIPULATIONS

- 1086** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 91-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 750 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 500 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1250 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 54 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 47-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons.

## APPROVAL STIPULATIONS

- 1087** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 99-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 1125 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 750 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1875 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 76-1/4 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 46-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 39-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1350 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 900 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 39-1/2 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 1350 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

## APPROVAL STIPULATIONS

- 1089** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 86-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 159-1/2 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 4219 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 1406 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 5625 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. This product shall be located inside of the tank and placed on foot extensions.
  9. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.
  10. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 45 inches.
  11. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the first compartment must be at least 1688 gallons.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the second compartment must be at least 5063 gallons.
  13. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  15. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.
  17. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the

## APPROVAL STIPULATIONS

tank must be at least 5063 gallons.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 48 inches, the volume of the upstream tank must be at least 1688 gallons.

19. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the tank must be at least 6750 gallons.

## APPROVAL STIPULATIONS

- 1090** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 86-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 159-1/2 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 8438 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 2813 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 11251 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. This product shall be located inside of the tank and placed on foot extensions.
  9. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.
  10. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 68 inches.
  11. When this unit is installed in a two-compartment tank and the liquid level is less than 71 inches, the volume of the first compartment must be at least 3376 gallons.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 71 inches, the volume of the second compartment must be at least 10125 gallons.
  13. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 42 inches above the bottom of the tank.
  15. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 48 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.
  17. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 71 inches, the volume of the

## APPROVAL STIPULATIONS

tank must be at least 10125 gallons.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 71 inches, the volume of the upstream tank must be at least 3376 gallons.

19. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 71 inches, the volume of the tank must be at least 13501 gallons.

## APPROVAL STIPULATIONS

- 1091** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49.5 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 91-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 750 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 500 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1250 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 54 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 47-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons.

## APPROVAL STIPULATIONS

- 1092** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 99-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 1125 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 750 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1875 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 76-1/4 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 46-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 39-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1350 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 900 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 44 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 900 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 1350 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1350 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 900 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 2250 gallons.

## APPROVAL STIPULATIONS

- 1093** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 99-1/4 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 2250 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 1500 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 3750 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 76-1/4 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 71 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 63 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 66 inches, the volume of the first compartment must be at least 1800 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 66 inches, the volume of the second compartment must be at least 2700 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 42 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 48 inches above the bottom of the tank.

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17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 66 inches, the volume of the tank must be at least 2700 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 66 inches, the volume of the upstream tank must be at least 1800 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 66 inches, the volume of the tank must be at least 4500 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 63 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 66 inches, the volume of the first compartment must be at least 1800 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 66 inches, the volume of the second compartment must be at least 2700 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 42 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 48 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 66 inches, the volume of the tank must be at least 2700 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 66 inches, the volume of the upstream tank must be at least 1800 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 66 inches, the volume of the tank must be at least 4500 gallons.

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- 1094** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 86-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 159-1/2 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 4219 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 1406 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 5625 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. This product shall be located inside of the tank and placed on foot extensions.
  9. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.
  10. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 45 inches.
  11. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the first compartment must be at least 1688 gallons.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 48 inches, the volume of the second compartment must be at least 5063 gallons.
  13. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  15. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.
  17. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the

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tank must be at least 5063 gallons.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 48 inches, the volume of the upstream tank must be at least 1688 gallons.

19. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 48 inches, the volume of the tank must be at least 6750 gallons.

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- 1095** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 86-1/2 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 159-1/2 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 8438 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 2813 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 11251 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. This product shall be located inside of the tank and placed on foot extensions.
  9. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.
  10. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 68 inches.
  11. When this unit is installed in a two-compartment tank and the liquid level is less than 71 inches, the volume of the first compartment must be at least 3376 gallons.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 71 inches, the volume of the second compartment must be at least 10125 gallons.
  13. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 42 inches above the bottom of the tank.
  15. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 48 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.
  17. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 71 inches, the volume of the

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tank must be at least 10125 gallons.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 71 inches, the volume of the upstream tank must be at least 3376 gallons.

19. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 71 inches, the volume of the tank must be at least 13501 gallons.

- 11096 — This product must be installed with the 3M pressure relief bleeder fitting permanently connected to the inlet of the hose serving this product when this product is not served by a separate water supply connection.
- 11101 — Because the reduction of arsenic, by reverse osmosis, has been demonstrated to be species dependent, the arsenic reduction claim is limited to systems that have a detectable free chlorine residual at the system inlet. Also, because free chlorine has been identified as a possible trigger for the release of arsenic; if chlorination of the water supply is required, then the chlorination process must not occur within the well.
- 11103 — When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L and F.O.G. of less than 30 mg/L.
- 11104 — When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- 11105 — Approval is issued for this product because the design of the product meets the intent of s. Comm 83.15 (6), Wis. Adm. Code that requires other types of sewage treatment tanks be constructed in accordance with s. Comm 83.20, Wis. Adm. Code. The intent of the code is met since this product provides an acceptable means of treating wastewater when it is installed in a properly designed tank.
- 11106 — This product may utilize either a Hydro Systems Company or Dema Engineering Company air gap fitting.
- 11107 — The installation of this product must comply with the following conditions:
  - 1. The peat, interior piping and other components of the module must be supplied by the manufacturer.
  - 2. The design wastewater flow to each module must not exceed 150 gallons per day.
  - 3. The wastewater influent strength must be residential strength.
  - 4. Maximum particle size in the influent must not exceed 1/16 of an inch.
  - 5. The influent to the modules must be by the means of pressure distribution.
  - 6. The maximum volume of a single dose must be between 7 and 12 gallons per module.
  - 7. The influent flow must be between 7 and 15 gallons per minute per module.
  - 8. The effluent from each module must be collected and discharged to a treatment/dispersal cell by the use of pressure distribution.
  - 9. The top of cover for each module must be at least 4 inches above finish grade.
- 11108 — This product must not receive wastewater that has had septic tank additives introduced into the wastewater.
- 11109 — This product will produce an effluent quality with monthly average values for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L, FOG of less than 30 mg/L, and fecal coliform of less than or equal to 10,000 cfu/100ml when the design and installation conforms to the conditions of its approval.

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- 1110** — Approval is issued for this product because the design of the product meets the intent of s. Comm 83.15 (6), Wis. Adm. Code that requires other types of sewage treatment tanks be constructed in accordance with s. Comm 83.20, Wis. Adm. Code. The intent of the code is met since this product provides an acceptable means of treating wastewater when it is installed in accordance with its approval.
- 1111** — Approval is issued for this product because the design of the product meets the intent of s. Comm 84.40 (8), Wis. Adm. Code that requires mechanical compression type joints for water supply which use flexible elastomeric seals to conform to ASTM Standard D3139. The intent of the code is met since this product provides an acceptable elastomeric seal.
- 1112** — Approval is issued for this product because the design of the product meets the intent of s. Comm 84.30 (5) (c) 1, Wis. Adm. Code that requires water hammer arrestors to meet ANSI Standard A112.26.1-84 or ASSE Standard 1010-82. The intent of the code is met since this product provides the same protection of the water supply system as devices that meet ANSI Standard A112.26.1-84 or ASSE Standard 1010-82 when installed in accordance with the stipulations of this approval.
- 1113** — When this product has an effluent filter installed in an interior wall, the space between the top of the interior wall and bottom of the tank cover must be sealed with a material that will withstand the environment in the tank and in a manor that will prevent waste from passing over the interior wall.
- 1114** — When this product receives wastewater from dwellings and is used as a septic tank, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1115** — When this product is installed as a septic tank, it must be installed with baffles on the inlet and outlet of the tank.
- 1116** — When this product is installed as a septic tank, the minimum distance between the inlet(s) and outlet(s) must be at least equal to the length of the longest wall or the diameter of a circle that has the same surface area of the tank, whichever is less.
- 1117** — When this product is installed as a septic tank or grease interceptor, the minimum distance between the inlet(s) and outlet(s) must be at least equal to the length of the longest wall or the diameter of a circle that has the same surface area of the tank, whichever is less.
- 1122** — This plumbing product may only be installed in conventional soil absorption systems, in ground pressure distribution systems and mound systems.
- 1126** — This product must be utilized in accordance with the manufacturer's printed installation instructions and this product approval. If there is a conflict between the manufacturer's installation instructions and the product approval, the product approval requirements will take precedence.
- 1127** — When this product does not include the integral Bio-Kinetic system and receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less then or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1128** — When this product includes the integral Bio-Kinetic system and receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less then or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.

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- 1130** — The flowing water supply pressure at the point(s) of connection must be at least 43 psig for models TRE 2836 3 2.5 STD, TRE 2836 3 2.5 B STD, TRE 2836 3 2.5 BR STD, TRE 2836 3 2.5 B BR STD, TRE 2844 4 2.5 STD, TRE 2844 4 2.5 B STD, TRE 2844 4 2.5 BR STD, TRE 2844 4 2.5 B BR STD; and 44 psig for TRE 2840 3 2.5 STD, TRE 2840 3 2.5 B STD, TRE 2840 3 2.5 BR STD, TRE 2840 3 2.5 B BR STD.
- 1131** — This product must be installed in accordance with the manufacturer's printed instructions, system approval, plan approval, and Wis. Adm. Code. If there is a conflict between the manufacturer's instructions and the plan approval, system approval or Wis. Adm. Code, the Wis. Adm. Code, plan approval and system approval will take precedence.
- 1132** — This product must hold a pressure equal to one-inch water column for five minutes after the product is installed or immediately prior to installation.
- 1133** — This product must be installed in the vertical position (plus or minus 15 degrees from plumb).
- 1134** — This product may only be installed in a vent system that has the required three-inch vent per s. Comm 82.31 (3) (b), Wis. Adm. Code extending to the outside atmosphere.
- 1137** — The vent system being served by this product may have horizontal offsets located less than 36 inches above the floor on which the fixtures are installed providing the vent does not connect to another vent.
- 1138** — This product may only serve as a termination point for a:
- branch vent,
  - circuit vent,
  - common vent,
  - combination drain and vent system,
  - individual vent,
  - stack vent,
  - wet vent, or
  - vent stack.
- 1139** — Branches which have fixtures served by this product must comply with all of the following.
- When connected to a stack which has four (4) or more branch intervals above the branch connection, the branch must be provided with a relief vent located between most downstream fixture and the stack, and
  - The branch must not connect to any horizontal drain within 20 pipe diameters downstream of the base of a two (2) inch or larger drain stack.

## APPROVAL STIPULATIONS

- 1140** — This product must be located and the system sized in accordance with Table 1.

Studor Mini-Vent Table 1			
Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance of Vent to Connection of Air Admittance Valve		
	1-1/4" Vent Diameter	1-1/2" Vent Diameter	2" Vent Diameter
1	35	NL (see note b)	NL
3	28	140	NL
6	NP (see note c)	100	200
20	NP	60 (see note d)	110
160	NP	NP	25

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code  
b: NL means no limit  
c: NP means not permitted  
d: Not more than two (2) water closets or similar type fixtures of four (4) or more drainage fixture units.

- 1141** — This product must be located and the system sized in accordance with Table 1.

Studor Maxi-Vent Table 1		
Maximum Developed Distance of Vent to Connection of Air Admittance Valve		
Maximum Drainage Fixture Units Served (see note a)	3" Vent Diameter	4" Vent Diameter
20	NL (see note b)	NL
160	300	NL

Notes: a: Drainage fixture units based on ch. Comm 82, Wis. Adm. Code  
b: NL means no limit

- 1142** — This product may not be located in any of the following areas.
- An enclosed stairwell,
  - an area subject to positive pressure conditions for more than 12 continuous hours,
  - an area utilized as supply or return air plenum, or
  - a pit, vault or depression which is below the adjacent grade or floor level.
- 1143** — This product may not serve as a vent termination point for any of the following.
- Vents installed to relief positive pressures,
  - vents serving chemical waste system,
  - vents serving POWTS holding tank or, POWTS treatment tank,
  - a stack vent serving two (2) or more branch intervals,
  - a vent stack that is required in accordance with s. Comm 82.31 (4) (a),
  - a vent serving a sump, or
  - a vent serving an automatic clothes washer standpipe.
- 1145** — Venting of this product must conform to s. Comm 82.31 (9) (a) 2, Wis. Adm. Code. Fixture drains installed in the vertical position shall be installed in accord with the venting requirements set forth for floor outlet water closets, and the vertical distance between the water level in the bowl and the center line of the horizontal portion of the fixture drain shall not exceed 36-inches as outlined in Comm 82.32 (4) (b) 1.c. Fixture drains installed in the horizontal position shall be subject to venting limitations specified in Comm 82.31 (10).
- 1146** — This system must be installed in accordance with the manufacturer's printed instructions guide 110.816.00.1.

## APPROVAL STIPULATIONS

- 1147** — When this product is installed in a POWTS in accordance with the manufacturer's recommendations and per the product approval, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1149** — This product may be located:
- inside a building,
  - under the overhang of a building,
  - less than 10 feet from an air intake,
  - less than 5 feet from a power exhaust vent,
  - less than 10 feet horizontally from and less than 2 feet above roof scuttles, doors, and openable windows,
  - less than 7 feet above a roof or the surrounding grade of an earth covered roof, however not less than 8 inches, and
  - less than 10 feet horizontally from a lot line.
- 1150** — Before this product is installed a warning label meeting the requirement of Comm s. 84.25(8)(b), Wis. Admin. Code must be securely attached to the manhole cover.
- 1151** — This product may only be installed in the outlet tee baffle of septic tanks or compartments that have a maximum daily flow rate of no more than; 800 gallons per day for models A100-8x12 and A300-8x12, 1200 gallons per day for models A100-8x18 and A300-8x18, 1800 gallons per day for models A100-8x26 and A300-8x26, 2400 gallons per day for models A100-8x32 and A300-8x32.
- 1152** — This product must be installed with a Spartan Chemical Co., Inc. model 9111 Vent T Connector fitting permanently connected to the inlet of the hose serving this product when the product is not served by a separate water supply connection.
- 1153** — Construction of this product must be designed and constructed in conformance with the specifications submitted and approved by this department and the sealant manufacturer's printed directions for use for the sealant materials.
- 1154** — The manufacturer must keep a set of plans and specifications for this product bearing the department's stamp of approval. The plans and specifications must be open to inspection by an authorized representative of the department.
- 1155** — When this product is installed in an exterior compartment, the discharge connection must be solvent cemented to a single four inch diameter Schedule 40 (ASTM D-2665 or ASTM D-1785) or SDR 26 (ASTM D-3034) PVC plastic pipe which extends through the outlet opening of the tank to a point at least three feet beyond the undisturbed ground surrounding the excavation made for the tank. When the boss stop is required to be removed, written permission must be obtained from the tank manufacturer prior to installation of the product.
- 1156** — This product may only be used in conjunction with beverage dispensers.
- 1163** — Approval is issued for this product as being equivalent to larger sized dose tanks that have a one-day reserve capacity located in the tank. The product meets the intent of approved component manuals that require that the tank have a one-day reserve capacity for the dose tank. The intent of the manuals is met since the installation of this product provides a method of providing a one-day reserve capacity in another tank located upstream of this tank.
- 1164** — This product must be installed in conjunction with a time dose trash trap serving an ATU prior to the wastewater being discharged into this product. The installation must include a float in this product that is capable of monitoring the liquid level and shut off the power to the pump in the trash trap before the wastewater level comes within a distance of three inches of the inlet to this product.

## APPROVAL STIPULATIONS

- 1165** — The dosing capacity of this product must meet the requirements of the system for which it serves.
- 1166** — A permanent warning label that conforms to s. Comm 84.25 (8), Wis. Adm. Code, must be attached to the cover of this product.
- 1169** — This product may not be located in any of the following areas.
- An area subject to freezing,
  - an enclosed stairwell,
  - an area subject to positive pressure conditions for more than 12 continuous hours,
  - an area utilized as supply or return air plenum, or
  - a pit, vault or depression which is below the adjacent grade or floor level.
- 1170** — This product may only serve as a termination point for the following types of vents serving a maximum two inch diameter drain:
- branch vent,
  - circuit vent,
  - common vent,
  - individual vent,
  - stack vent,
  - wet vent, or
  - vent stack.
- 1171** — This product must be located and the system sized in accordance with Table 1.

Oatey Sure-Vent II			
Table 1			
Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance of Vent to Connection of Air Admittance Valve		
	1-1/4" Vent Diameter	1-1/2" Vent Diameter	2" Vent Diameter
1	35	NL (see note b)	NL
3	28	140	NL
6 (see note c)	NP (see note d)	100	200

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code  
b: NL means no limit  
c: No water closets or similar type fixtures of four (4) or more drainage fixture units  
d: NP means not permitted

- 1172** — This product must be located:
- within a heated area of the building,
  - a minimum of 4 inches above the weir of the highest fixture trap being served (see note a),
  - no more than 20 inches below the flood rim of any fixture served by this product (see note a),
  - in an accessible area,
  - within a ventilated space that allows air to enter the product and has an opening with an area of at least one-inch to the building air, and
  - in accordance with s. Comm 82.31 (9), Wis. Adm. Code.

Note a: The distance is measured from termination of the vent pipe to the point noted in the stipulation.

## APPROVAL STIPULATIONS

- 1173** — This product must be located:
- within the confines of a building structure,
  - a minimum of 4 inches above the weir of the highest fixture trap being served (see note a),
  - no more than 20 inches below the flood rim of any fixture served by this product (see note a),
  - at least 6 inches above insulation materials (see note a),
  - in an accessible area,
  - within a ventilated space that allows air to enter the product and has an opening with an area of at least one-inch to the building air or outside air, and
  - in accordance with s. Comm 82.31 (9), Wis. Adm. Code.

Note a: The distance is measured from termination of the vent pipe to the point noted in the stipulation.

- 1176** — This product is approved to use the following:
- The inlet location may be lower then the listed liquid level specified for this product.
- 1177** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - WDZ Gasket System by Del Zotto Products Corp.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 1178** — The distance from the top of the NIBBLER, Jr. to the top of the access opening must be no more than 24 inches.
- 1179** — When this product is in installed with a NIBBLER Jr model NJGR-0002, NJRL-0002 or NRJC-0002 in a POWTS in accordance with the manufacturer's recommendations and per the product approval, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1180** — When this product is in installed with a BIO-MICROBICS MICRO FAST in a POWTS in accordance with the manufacturer's recommendations and per the product approval, which receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- 1181** — When this product is in installed with a BIO-MICROBICS HIGH STRENGTH FAST in a POWTS in accordance with the manufacturer's recommendations and per the product approval, which receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L.

## APPROVAL STIPULATIONS

- 1186** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" gaskets.
  - Dual inlets at end of tank with an access opening above one inlet and an observation opening over the other inlet.
  - Bottom pipe openings for pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 1191** — This product must be installed in accordance with ASTM standard F 1216 - 93.
- 1192** — Joints between riser sections shall be seal with neoprene gasket supplied by the manufacturer and the riser must be installed on existing tanks in accordance with the riser manufacturer's installation instructions.
- 1197** — When this product is used in conjunction with a high head turbine pump, the pump must be installed in the manufacturer's Flow Inducer located in the screen vault.
- 1198** — When this product is used to pump from a single compartment septic/pump tank, the discharge rate of the pump must not exceed 30 gallons per minute.
- 1199** — When this product has a siphon installed in the vault, the siphon must discharge discrete, incremental volumes of effluent.
- 1200** — When this product is use in conjunction with a simplex pump in a septic tank used as a septic tank effluent pump system, the size of the septic tank must be sufficient to accommodate a:
1. Treatment zone equal to 2.088 times the design wastewater flow entering the tank,
  2. Drawdown zone, and
  3. One-day reserve zone above the high water alarm level.
- 1201** — When this product is installed in conjunction with a simplex pump in a pump tank, the size of the pump tank must be sufficient to accommodate a one-day reserve zone above the high water alarm level.
- 1202** — When this product is use in conjunction with a simplex pump in the pump compartment of a septic/pump tank:
1. The pump compartment must be sufficient to accommodate a one-day reserve zone above the high water alarm level; or
  2. The septic/pump tank must be sufficient to accommodate a:
    - a. Treatment zone equal to 2.088 times the design wastewater flow entering the tank,
    - b. Drawdown zone, and
    - c. One-day reserve zone above the high water alarm level.
- 1203** — This product must be installed downstream of an approved septic tank that has a minimum liquid volume of 1500 gallons.
- 1206** — This pool will be used for medically administered therapy, in a health care or therapy related facility.
- 1207** — This pool shall be installed, maintained and operated as per manufacturers recommendations, and shall be used only under direct supervision of trained personnel, per DHSS requirements.
- 1208** — Individual plan approval must be obtained from this department's Section of General Plumbing for each installation site prior to its installation.

## APPROVAL STIPULATIONS

- 1210** — The inlet baffle must extend to at least 9 inches below the normal liquid level of the tank, but greater than 1/3 of the normal liquid level of the tank.
- 1211** — Approval is issued for this product as having an equivalent form of backflow protection built into the internal water supply. The product meets the intent of the code by providing a method that ensures the vacuum breakers will not be subjected to backpressure due the height of the shower or disinfectant hose.
- 1212** — Installation of Oatey Sure-Vent II air admittance valves are optional for venting sinks, tubs, showers and lavatories in accordance with the Oatey Sure-Vent II Wisconsin product approval.
- 1214** — This tank may only be installed in conjunction with the Orenco Systems Inc., Advantex AX-20 series sewage treatment apparatus.
- 1215** — When this product is used to pump from a single compartment septic/pump tank, the discharge rate of the pump must not exceed 40 gallons per minute.
- 1216** — When this product receives wastewater from dwellings and is used as a septic tank effluent pump system, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1220** — A tank with a minimum capacity of 750 gallons must be located upstream of this product whenever a Bio-Microbics 1.0 High Strength Fast unit is installed in this product.
- 1221** — This tank may only be used in conjunction with the Bio-Microbics Inc., Micro Fast 3.0 or High Strength Fast 3.0 units.
- 1222** — This product is recognized to treat a maximum of 0.498 pounds per day of BOD5.
- 1223** — Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will produce effluent with monthly average values as indicated in Table 1 when the influent has average monthly values for BOD5 of 150 mg/L, TSS of 40 mg/L, TN 65 mg/L and FOG of 20 mg/L.

Table 1

### Effluent Strength from Treatment System

Mode	BOD5 (mg/L)	TSS (mg/L)	TN (mg/L)	Fecal Coliform (cfu/100 ml)
Mode 1 Blend Discharge	20	20	30	>10,000
Mode 1 Filtrate Discharge	15	15	25	<1000
Mode 3 Blend Discharge	30	20	15	>10,000
Mode 3 Filtrate Discharge	15	15	10	<1000

- 1224** — This tank may only be installed in conjunction with the Orenco Systems Inc., AdvanTex AX-10 or AX-20 series sewage treatment apparatus.
- 1225** — The maximum daily wastewater flow which may discharge through this product is 450 gallons per day when the product is installed with a Advantex AX-10 and 600 gallons per day when the product is installed with a Advantex AX-20.

## APPROVAL STIPULATIONS

- 1226** — When the first compartment of this product is installed as a combination exterior grease interceptor/POWTS treatment tank, the capacity of the grease interceptor must not exceed 1500 gallons.
- 1227** — Plan approval must be obtained prior to installation from this Department's Bureau of Integrated Services for each complete project. Each complete project must be designed in accord with chapter COMM 90 requirements. This plumbing product approval is for the pre-fabricated shell of this product only.
- 1228** — The water agitation system shall be separate from the recirculation system and shall not be connected to the main drain piping.
- 1229** — The recirculating system shall be designed and installed to maintain thirty seven(37) gallons per minute of flow rate.
- 1230** — The whirlpool shells will be marked with the manufacturers name and serial number on the surface of the top step. The serial number will include the letter C as the last character indicating compliance with chapter COMM 90.
- 1231** — Whirlpool shell will be modified to meet COMM 90 by increasing the main drain size to a minimum of eight square inches and providing a means to drain the recessed seat area into the pool basin.
- 1232** — This approval will be valid through December 31, yr, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Plumbing Product Approval Number must be provided when plans that include this product are submitted for review.
- 1233** — **DISCLAIMER**  
  
The department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement not specified in this document.
- 1235** — Installation of systems that conform to this POWTS component manual must consist of wastewater treatment tank(s) approved by the Department of Commerce, Division of Safety and Buildings that meet the criteria listed in the manual. Tanks that are approved with options that allow the tank to meet the requirements of this manual, without further modifications to the tank, are considered approved tank in accordance with this manual.
- 1236** — Approval of this POWTS Component Manual is for recognition for designs of systems that are covered by this manual. Systems that are designed, installed and maintained in accordance with this manual will provide treatment and dispersal of domestic wastewater in conformance with s. Comm 83, Wis. Adm. Code.
- 1239** — An access opening extending to grade and having a minimum dimension of 16 inches must be provided to install this product.
- 1240** — The tank in which this product is installed must have:
  - 1. A reserve zone, if one is required by system design or plan approval, above the high water alarm on level that is at least equal to the estimated daily wastewater flow into the tank,
  - 2. A capacity below the pump on level that is at least equal to 2.088 times the design wastewater flow into the tank,
  - 3. The top of the filter panel(s) located at least 9 inches below the pump off setting, and
  - 4. The bottom of the filter panel(s) located above the bottom of the tank by a distance equal or greater than 1/3 of distance between the pump off level and the bottom of the tank.

## APPROVAL STIPULATIONS

- 1241** — This product must be located and the system sized in accordance with Table 1.

RectorSeal, Magic Vent Micro Vent Table 1			
Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance to Connection of Air Admittance Valve		
	1-1/4" Vent Diameter	1-1/2" Vent Diameter	2" Vent Diameter
1	35	NL (see note b)	NL
3	28	140	NL
6	NP (see note c)	100	200
20	NP	60 (see note d)	110
160	NP	NP	25

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code

b: NL means no limit

c: NP means not permitted

d: Not more than two (2) water closets or similar type fixtures of four (4) or more drainage fixture units

- 1244** — This product may only serve One- or Two-family dwellings and must be sized in accordance with the AdvanTex Treatment System Filter Sizing Chart below.

AdvanTex Treatment System  
Filter Sizing Chart

AX Units	Maximum Number of Bedrooms*	Minimum Processing Tank Size in Gallons**
AX10	3	1500***
AX20	4	1500***
AX10 + AX20****	5	2000***
AX20 + AX20****	6	3000***

Note:

\* Systems with greater than 6 bedrooms are required to be sized by Orenco Systems Inc., and submitted to Dept. of Safety and Buildings as an Individual System Design in accordance with s. Comm 83.22 (1), Wis. Adm. Code.

\*\* The processing tank(s) must be a two compartment tank or two-single compartment tanks.

\*\*\* The first compartment of the two compartment tank or the first tank of the two-single compartment tanks shall contain at least 2/3 of the required capacity. The second compartment of the two compartment tank or the second tank of a two-single compartment tanks shall contain at least 1/3 of the required capacity.

\*\*\*\* Multiple units must be loaded in parallel.

- 1245** — This product may only be installed in the outlet tee baffle of septic tanks or compartments that have a maximum daily flow rate of no more than; 3000 gallons per day for models A100-12x20-VC, A100-12x20-VCF, A101-12x20, A300-12x20-VC, A300-12x20-VCF, and A301-12x20; 4500 gallons per day for models A100-12x28-VC, A100-12x28-VCF, A101-12x28, A300-12x28-VC, A300-12x28-VCF, and A301-12x28; 6000 gallons per day for models A100-12x36-VC, A100-12x36-VCF, A101-12x36, A300-12x36-VC, A300-12x36-VCF, and A301-12x36.
- 1248** — The therapy tank will be marked with the manufacturer's name and serial number. The model numbers will include the letter W as the last character indicating compliance with chapter Comm 90.

## APPROVAL STIPULATIONS

- 1255** — Approval of this POWTS Component Manual is for recognition for designs of systems that are covered by this manual. Systems that are designed, installed and maintained in accordance with this manual will produce effluent having monthly average values of less than or equal to 30 mg/L for BOD5 and TSS and monthly geometric mean value of less than or equal to 1000 cfu/100ml for fecal coliform if properly designed and maintained.
- 1256** — A septic tank (pretreatment tank/trash trap) with a volume of at least 50% of the gallon per day rating of this product must be installed upstream of this product.
- 1257** — This product shall not be used for the cleaning of any parts that may contain oil or grease or any parts that may have cooking oil or shortening residue.
- 1258** — Disposal of cooking oil, grease or shortening into the drains of this product is prohibited.
- 1259** — The Fresh water tank of this product must be sanitized prior to filling the tank each time.
- 1260** — The Waste water tank of this product must be sanitized prior to connecting it to the drain piping of this product each time.
- 1261** — The waste from the Waste tank of this product must be properly discharged.
- 1262** — This product in two inch (2") size must be labeled with ASTM 3035, three inch (3") through six inch (6") must be labeled with either ASTM D3035 or ASTM F714, and eight inch (8") size must be labeled with ASTM F714.
- 1263** — When this product is installed at a distance greater than thirty inches (30 ") below the top of the access opening, a plastic pipe must be securely attached to the socket on top of the filter. The top of the pipe shall terminate with a tee or ell, which is solvent cemented onto the pipe. The top of the pipe must be at a distance less than thirty inches (30") below the top of the access opening.
- 1264** — This product must be installed with a Ecolab Side Kick bleeder valve permanently attached to the Kuri Tec PVC food grade hose serving the product and with Dema model 163 AG or 164 AG air gap proportion inside of the unit.
- 1265** — This product may only be installed in the outlet tee baffle of septic tanks or compartments that have a maximum daily flow rate of no more than 1200 gallons per day.
- 1266** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.34 (5)(b)1, Wis. Adm. Code that requires the liquid level to be no more than 72". The intent of the code is met since this product provides an acceptable rate of settling of wastewater and means to retain FOG and solids in the tank.
- 1267** — This product is approved to use the following:
- Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
- 1268** — Approval is issued for this product because the design of the product meets the intent of s. Comm 82.40 (4)(c)1.b., Wis. Adm. Code that requires a control valve in fixture supply to each plumbing fixture. The intent of the code is met since this product provides an acceptable method of valving up to four lavatory faucets in a penal setting.
- 1269** — A minimum 2" diameter vent must be provided on the building sewer within eight feet of the connection to the tank when the tank is used a pump tank.
- 1270** — This product must be discharged through an air-gap or air-break into a waste sink, floor sink, or standpipe that meets the requirements of s. Comm 82.33 (8) of the Wis. Adm. Code.

## APPROVAL STIPULATIONS

- 1271** — This product must be installed with an acceptable shampoo sink faucet.
- 1272** — The maximum daily wastewater flow, which may discharge through this product is 35,000 gallons per day.
- 1273** — When this product receives wastewater with an influent having a quality with a maximum monthly average value for BOD5 of 384 mg/L, TSS of 90 mg/L TSS, F.O.G. of 30 mg/L, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 5 mg/L, TSS of less then or equal to 20 mg/L TSS and nitrogen less than or equal to 6 mg/L when maintained and operated in accordance with the manufacturer's operation and maintenance instructions.
- 1274** — This product must be installed in accordance with the manufacturer's printed instructions, product approval, and plan approval. If there is a conflict between the manufacturer's instructions and the product approval and/or plan approval, the product approval and/or plan approval will take precedence.
- 1275** — The recirculation rate of this whirlpool must be between 75 and 91 gallons per minute.
- 1276** — Maximum water flow to each water agitation system must not exceed 160 gallons per minute.
- 1277** — Label identifying this model of whirlpool is located inside skimmer adjacent to autofill.
- 1279** — This product is approved to use the following:
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Cast-A-SEAL Gasket as cast into wall.
- 1280** — The 4", 6" and 8" size of is product must be installed in accordance with ASTM standard F 1216 - 93.
- 1281** — Piping using this product is limited to receive the maximum drainage fixture units indicated in the following table.

Maximum Number of Drainage Fixture Units Which may Drain Through Any  
 Portion  
 of a Building Drain, Building Subdrain, Building Sewer or Private Interceptor  
 Sewer

Pipe Diameter	Pitch (inch per foot)			
	1/16	1/8	1/4	1/2
2"	NP	NP	4	6
3"	NP	19	22	26
4"	NP	115	138	160
6"	NP	520	624	742
8"	1048	1198	1437	1722

NP means not permitted

## APPROVAL STIPULATIONS

- 1282** — This product may be installed for the following drain or vent use(s):
- a. Building Drain . . . . . gravity flow, underground
  - b. Building subdrain . . . . . gravity flow, underground
  - c. Sanitary sewer . . . . . gravity flow
  - d. Private Interceptor Main sewer . . . . . gravity flow
  - e. Building Drain . . . . . gravity flow, underground
  - f. Building subdrain . . . . . gravity flow, underground
  - g. Sanitary sewer . . . . . gravity flow
  - h. Private Interceptor Main sewer . . . . . gravity flow
- 1283** — This product must be labeled with NuFlow on the product.
- 1284** — The 2" and 3" size of is product must be installed in accordance with the manufacturer's printed installation instructions.
- 1285** — This product may receive waste from recreational vehicles.
- 1286** — When this tank is installed to receive wastewater from only recreational vehicals, the tank must be installed by either a licensed plumber or a holder of a servicing license issued pursuant to s. 146.20, Wis. Stats., and ch. NR 113, Wis. Admin. Code. All servicing and disposal of the contents from these tanks must be in accord with s. 146.20, Wis. Stats., and ch. NR 113, Wis. Admin. Code.
- 1287** — A minimum 2" diameter vent must be provided on the building sewer within 12" of the connection to the tank or on the tank installed in accordance with the manufacturer instructions.
- 1288** — Piping using this product is limited to receive the maximum drainage fixture units indicated in the following table.

Maximum Number of Drainage Fixture Units Which may Drain Through Any  
Portion  
of a Building Drain, Building Subdrain, Building Sewer or Private Interceptor  
Sewer

Pipe Diameter	Pitch (inch per foot)			
	1/16	1/8	1/4	1/2
3"	NP	22	26	31
4"	NP	129	155	179
6"	NP	560	672	800
8"	1185	1355	1626	1947

NP means not permitted

- 1289** — This product must be labeled with Perma-Liner Industries, Inc., Perma-Liner Lateral System with pipe size on the product.
- 1290** — The 3" size of is product must be installed in accordance with the manufacturer's printed installation instructions.

## APPROVAL STIPULATIONS

- 1293** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch inlet through cover of tank for holding.
  - Four inch discharge opening in riser.
  - Six inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
  - Dual inlets and outlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Installation of a Nibbler, Jr. unit within the second compartment of the tank.
  - An opening, which has its top at least 9 inches below the liquid level and its bottom no more than 1/3 of the liquid level in the center wall of the tank.
- 1295** — Riser covers must only have tamper proof screws installed.
- 1296** — When this product is installed in a dispersal cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, this product must receive wastewater having a BOD5 value between 30 and 220 mg/L and a TSS value between 30 and 150 mg/L.
- 1297** — When this product is installed in a distribution cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, this product must be installed in individual excavations that create a row of chambers that are horizontally separated from other rows in other excavations by at least 3 feet. The 3-foot measurement is measured between the closest out side edges of the leaching chambers.
- 1298** — When this product is installed in a distribution cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, the distribution cell design must allow at least six inches of ponding in the chambers without backflow of wastewater into the drainpipe that discharges into the chambers.
- 1299** — When this product is installed in a distribution cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, this product must be installed in a distribution system, which has the top of the distribution cell at or below original grade.
- 1300** — A means of venting the gases formed inside of the tank in which this product is installed shall be provided in accordance with s. Comm 84.25 (5), of the Wisconsin Administrative Code.
- 1301** — This product must be installed in accordance with the manufacturer's installation instructions and with the bottom of the product above the scum level in the tank.
- 1302** — When this product is installed as a grease interceptor, the inlet baffle shall extend 1/3 of the liquid level depth below the liquid level in the tank and the outlet baffle shall extend 2/3 of the liquid depth below the liquid level in the tank.

## APPROVAL STIPULATIONS

- 1303** — This product is approved to use the following:
- Four inch pipe inlet located in the edge of the tank cover.
  - Four inch discharge opening in riser.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Four inch pipe openings located near the bottom of the side or end wall for siphon, pump and holding tanks.
  - Steel locking cover for the access opening.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Eight inch threaded plugged opening in access cover.
  - Six-inch diameter opening in lower portion of the interior wall for siphon, pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Press Seal "Cast-A-Seal" gasket by Press Seal Gasket Corp.
- 1304** — The swim facility shall adhere to the Department of Health and Family Services requirements for water testing protocol, water quality parameters, closure thresholds, and reopen procedures.
- 1305** — The swim facility shall keep records and report data and submit them for review as required by the Department of Health and Family Services.
- 1306** — A water meter shall be installed that exclusively measures the volume of water discharged into the swim basin.
- 1307** — The Village of Slinger shall keep daily records of the amount of water added to the swim basin and submit them upon request to the department.
- 1308** — Signage shall be posted giving notice that the water quality at the facility does not meet water quality parameters of a swimming pool and if patrons have questions concerning water quality they are to contact management of the swim facility.
- 1309** — The below water line portion of the diving structure shall be padded or shall be made distinctly visible so that an underwater swimmer is able to see the structure from a distance of at least five feet with unaided vision.
- 1310** — The time limit for this experiment is five years at which time it will either be extended, codified, or terminated. This experiment may be terminated at any time if the departments of Commerce or Health and Family Services determines it is not being maintained as stated in this approval.
- 1311** — The Department of Natural Resources shall be contacted and proper permits obtained for discharge water.
- 1312** — The daily wastewater flow, which may discharge through this product, is 150 to 600 gallons per day.
- 1313** — This product must be installed downstream of a septic tank that is recognized by this department to treat the total design wastewater flow from the building being served.
- 1314** — The maximum soil application rate of the treatment/dispersal cell that receives that wastewater from this product must be sized in accordance with the application rates listed in Table 83.44-2 under BOD5 equal to or less than 30 mg/L or TSS equal to or less than 30 mg/L column heading.
- 1315** — The minimum depth of unsaturated soil for treatment purposes of the treatment/dispersal cell that receives that wastewater from this product must comply with the vertical distance listed in Table 83.44-3 under Fecal Coliform equal to or less than 10,000 cfu/100ml column heading.

## APPROVAL STIPULATIONS

- 1316** — Installation and maintenance of this product must be in accordance with the manufacturer's printed installation and maintenance instructions dated March 12, 2002.
- 1317** — This product is approved to use the following:
- Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
- 1318** — This product may connect to the fixture supplies serving a lavatory when the water supply system is designed to adequately supply this product and the lavatory with proper pressure and flow in accordance with s. Comm 82.40(7) of the Wis. Adm. Code.
- 1319** — When this product discharges waste through indirect waste piping, the waste must discharge to an acceptable receptor in accordance with s. Comm 82.33 (8) of the Wis. Adm. Code.
- 1320** — Installation and maintenance of this product must be in accordance with the manufacturer's printed installation and maintenance instructions.
- 1321** — Plan review for the installation of this product must be obtained from the department in accordance with s. Comm 82.20 (1) of the Wis. Adm. Code.
- 1322** — Approval of this POWTS Component Manual is for recognition for designs of systems that are covered by this manual. Systems that are designed, installed and maintained in accordance with this manual will produce effluent having equal to or less than 25 mg/L BOD5, 30 mg/L TSS and 8-20 mg/L nitrite+nitrate-nitrogen and 10-30 mg/L of Total N. Systems using this method of treatment can also be designed to achieve less than 10 mg/L Total Nitrogen if properly designed and maintained.
- 1323** — A tank with a minimum capacity of 750 gallons must be located upstream of this product.
- 1324** — This product may be used without primer for PVC DWV pipe up to and including six diameter.
- 1326** — When a department approved effluent filter is installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance or baffle shall be installed in the outlet of the septic tank or compartment.
- 1328** — When this product is installed in a dispersal cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, this product must be installed in individual excavations that create a dispersal cell that is horizontally separated from other dispersal cells in other excavations by at least 3 feet. The 3-foot measurement is measured between the closest outside edges of the product listed in the regarding block of the product approval letter.
- 1329** — When this product is installed in a dispersal cell the design of the dispersal cell must allow at least six inches of ponding in the product without backflow of wastewater into the drainpipe that discharges into this product.
- 1330** — When this product is installed in a dispersal cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, this product must be installed in a dispersal system, which has the top of the dispersal cell at or below original grade.

## APPROVAL STIPULATIONS

- 1331** — This product must have geotextile fabric that meets requirements of s. Comm 84.30 (6) (g), Wis. Adm. Code, installed directly on top of the product and extending down along the sides of the product to a point at least six inches from the bottom of the product.
- 1332** — EISA means the Equivalent Infiltrative Soil Area per product which is used to size the soil treatment/dispersal cell using soil application rates specified in Table 83.44-1 or Table 83.44-2 of the Wis. Adm. Code.
- 1333** — Approval is issued for this product because the installation of the sink discharging into this product meets the intent of s. Comm 82.32 (5), Wis. Adm. Code that requires direct fixture connection to a drain system. The intent of the code is met since the installation of this product requires an individual sink to discharge its waste vertically through an indirect waste pipe that terminates 3/16" to 3/8" above the splash-guard grid of this product which is directly connected to the drain system.
- 1334** — This product is labeled with the pressure rating, dimensional ratio (DR), specific approvals, and special testing on the product.
- 1335** — This product is color coded as follows: Green or black - Sanitary sewer pipe, Blue - Drinking water, and Purple or violet - Reuse water
- 1336** — This product may be installed for the following drain or vent use(s):
- a. Sanitary drain and vent piping . . gravity flow aboveground
  - b. Sanitary drain and vent piping . . gravity flow underground
  - c. Sanitary sewer . . . . . gravity flow
  - d. Storm drain and vent piping . . . gravity flow aboveground
  - e. Storm drain and vent piping . . . gravity flow underground
  - f. Storm sewer . . . . . gravity flow
- 1337** — This product must be labeled with manufacturer's name or trademark, material designation and type, "F 1673", and schedule size.
- 1338** — This product complies with the Flame Spread and Smoke Developed limits listed in s. 602.2.1 of the International Mechanical Code, therefore this product may be installed in an air plenum.
- 1340** — The required pretreatment tank(s) must have a liquid volume of 2.088 times the design wastewater flow in gallons per day.
- 1342** — The system must be designed to provide 13 feet of head pressure at the spray nozzle in the SCAT BioFilter.
- 1343** — Flow rate for each spray nozzle is 3 gallons per minute.
- 1344** — The system must be designed and installed to recirculate effluent at a rate of 4:1 or an 80% return to the pretreatment tank(s) and a 20% flow to the final dispersal system.
- 1345** — The recirculated effluent must discharge to building sewer pipe upstream of the pretreatment tank(s).
- 1346** — System must be maintained at least once every 6 months.
- 1347** — The effluent being dosed to this product must comply with the following design requirements:
- Individual Dose Volume to the SCAT BioFilter shall be less than or equal to 16 gallons.
  - The volume of effluent discharged to the final dispersal system shall be less than or equal to 3.2 gallons.
  - The total number of doses per 24 hours shall be equal to or greater than 125 doses.
  - The maximum amount of effluent dosed to the SCAT BioFilter shall be equal to or less than 2000 gallon per day.

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- 1348** — The effluent being dosed to this product must comply with the following design requirements:
- Individual Dose Volume to the SCAT BioFilter shall be less than or equal to 27 gallons.
  - The volume of effluent discharged to the final dispersal system shall be less than or equal to 5.4 gallons.
  - The total number of doses per 24 hours shall be equal to or greater than 120 doses.
  - The maximum amount of effluent dosed to the SCAT BioFilter shall be equal to or less than 3250 gallon per day.
- 1349** — The effluent being dosed to this product must comply with the following design requirements:
- Individual Dose Volume to the SCAT BioFilter shall be less than or equal to 44 gallons.
  - The volume of effluent discharged to the final dispersal system shall be less than or equal to 8.8 gallons.
  - The total number of doses per 24 hours shall be equal to or greater than 119 doses.
  - The maximum amount of effluent dosed to the SCAT BioFilter shall be equal to or less than 5250 gallon per day.
- 1350** — The effluent being dosed to this product must comply with the following design requirements:
- Individual Dose Volume to the SCAT BioFilter shall be less than or equal to 8 gallons.
  - The volume of effluent discharged to the final dispersal system shall be less than or equal to 1.6 gallons.
  - The total number of doses per 24 hours shall be equal to or greater than 125 doses.
  - The maximum amount of effluent dosed to the SCAT BioFilter shall be equal to or less than 1000 gallon per day.
- 1351** — When this product is installed for gravity flow drainage piping, all heat fusion joints shall have any internal bead removed.
- 1352** — The wastewater flow discharge through this product must be equal to or less than 6 gallons per minute.
- 1353** — The wastewater received by this product must have a BOD5 and TSS value of equal to or less than 30 mg/L.
- 1354** — When this product is installed in a tank, the tank must be approved by the Department of Commerce, Division of Safety and Buildings for use with this product.
- 1355** — An access opening of sufficient size and location to allow servicing of this product must be provided. This access opening must terminate at or above finish grade.
- 1356** — The wastewater discharged from this product will have a Fecal Coliform value of equal to or less than 10,000 cfu/100ml.
- 1357** — The piping material must meet ASTM Standard F714 or AWWA Standards C901 or C906.
- 1358** — The minimum wall thickness of the piping being installed using this system shall be 0.375 inches.
- 1359** — The joint fusion method utilized on gravity flow system(s) shall not create an obstruction or protrusion on interior pipe surfaces.
- 1360** — Gravity flow piping shall be tested with water in accord with Comm 82.21 (1)(d). After completion of the water test a visual inspection shall be conducted to confirm proper pitch and joint alignment.
- 1361** — The total drainage load in any portion of sanitary drain piping shall not exceed the limits specified in Comm 82.30 (4) (a) 1. and Comm 82.36 (5) for storm sewer piping systems. For sizing purposes the pipe diameters shall be based on the nominal inside diameter only.

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- 1362** — This system must be installed in accordance with the manufacturer's printed instructions, alternate system approval, plan approval, and Wis. Adm. Code. If there is a conflict between the manufacturer's instructions and the plan approval, alternate system approval or Wis. Adm. Code, the Wis. Adm. Code, plan approval and alternate system approval will take precedence.
- 1363** — This system may be installed for the following water and drain use(s):
- a. Water service
  - b. Sanitary sewer
  - c. Sanitary drain and vent piping . . . . . underground
  - d. Storm sewer
  - e. Storm drain and vent piping . . . . . underground
- 1369** — This product is approved to use 24", 36", and 48" diameter risers or risers that are rectangular or square with a minimum inside dimension of 24".
- 1370** — The space between the top of the interior walls and bottom of the tank cover must be sealed with a material that will withstand the environment in the tank and in a manner that will prevent waste from passing over the interior wall.
- 1371** — Prior to installation of this product, plans and specifications must be submitted to the department for review and approval in accordance with s. Comm 82.20 of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.
- 1372** — Sizes up to and including 10" diameter must conform to American Association of State Highway and Transportation Officials (AASHTO) standard M 252.
- 1373** — Sizes 12" up to and including 48" diameter must conform to American Association of State Highway and Transportation Officials (AASHTO) standard M 294.
- 1374** — Pipe having a diameter of 60" must conform to American Association of State Highway and Transportation Officials (AASHTO) standard MP-7.
- 1376** — This product is approved to use the following:
- Side opening for when product is used as a holding tank.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Manhole riser and cover having a rectangular, round, or square shape with a minimum 24" inside dimension.

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- 1377** — This product is approved to use the following:
- Four inch discharge opening in riser.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Manhole riser and cover having a rectangular, round, or square shape with a minimum 24" inside dimension.
- 1378** — This product is approved to use the following:
- Four inch or Six inch inlet openings.
  - Inlet may be located in the side or end of the tank.
  - The liquid level of the tank may vary, but not to exceed 65 inches.
- 1379** — When this product is used for denitrification of the wastewater, the wastewater in the septic tank must have a nitrate value greater than 3 mg/l and a dissolved oxygen value equal to or less than 0.5 mg/l.
- 1380** — When this product is used for denitrification of the wastewater, the size of the septic tank must take into consideration the impact of recirculation on detention time.
- 1382** — Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of contaminants with an average influent value of Total Kjeldal Nitrogen (TKN) of 37.62 mg/L, Ammonia (NH<sub>4</sub>) 24.98 mg/L, BOD<sub>5</sub> 134 mg/L, TSS 164 mg/L, and Fecal Coliform 1452000 cfu/100 ml to produce an effluent with values of Total Kjeldal Nitrogen (TKN) of 10.43 mg/L, Nitrate (NO<sub>2</sub>) 0.29, Nitrite (NO<sub>3</sub>) 4.76 mg/L, Ammonia (NH<sub>4</sub>) 3.74 mg/L, BOD<sub>5</sub> 10.4 mg/L, TSS 18 mg/L, and Fecal Coliform 16700 cfu/100 ml when this product is maintained in accordance to the manufacturer's maintenance requirements.
- 1383** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in a single- or two-compartment tank with or without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 36 inches.
  4. The minimum liquid level of the tank or tank compartment that house the Bio-Microbics treatment unit must be at least 36 inches.
  5. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit must be at least 225 gallons.
  6. The diameter of the outlet pipe from the Bio-Microbics treatment unit is three inches.
  7. The dimension of the hole in the tank cover must have a minimum dimension of 18 inches.
  8. The maximum bury depth of the tank is 48 inches.

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- 1384** — The maximum daily wastewater flow, which may discharge through this product, is 375 gallons per day.

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- 1385** — This unit must be installed in a tank or tanks that comply with the following:
1. This model and size Bio-Microbics treatment unit may be installed in the second compartment of a two-compartment tank, a single compartment tank located downstream of another treatment tank, or a single-compartment tank without any preceding tank.
  2. The inside width of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 49.25 inches.
  3. The inside length of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 78 inches.
  4. The capacity of the tank compartment or tank, that houses the Bio-Microbics treatment unit, that is located downstream of another tank compartment or tank must be at least 750 gallons.
  5. The capacity of the tank compartment or tank that is located upstream of the tank compartment or tank that houses the Bio-Microbics treatment unit must be at least 500 gallons.
  6. The capacity of the tank that does not have another tank located upstream of the tank that houses the Bio-Microbics treatment unit must be at least 1250 gallons.
  7. The diameter of the outlet pipe from the Bio-Microbics treatment unit is four inches.
  8. The dimension of the hole in the tank cover is 49 inches by 54 inches.
- When the tank cover suspends the unit, items 9 through 20 must be complied with.
9. The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
  10. The distance from top of tank cover to bottom inlet of the Bio-Microbics treatment unit is 47-1/2 inches.
  11. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.
  12. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.
  13. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.
  14. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).
  15. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.
  16. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

## APPROVAL STIPULATIONS

17. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

18. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

19. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

20. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons.

When this unit is to be located inside of the tank and placed on foot extensions, items 21 through 31 must be complied with.

21. There is no minimum distance from under side of tank cover to top of the Bio-Microbics Treatment unit.

22. The liquid level of the tank or tank compartment that houses the Bio-Microbics treatment unit must be at least 40-1/2 inches.

23. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the first compartment must be at least 600 gallons.

24. When this unit is installed in a two-compartment tank and the liquid level is less than 44 inches, the volume of the second compartment must be at least 900 gallons.

25. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must have an open area of at least 28.27 inches (equivalent to a six-inch diameter hole).

26. When this unit is installed in a two-compartment tank the bottom of the opening in the dividing wall between compartments must be at least 21 inches above the bottom of the tank.

27. When this unit is installed in a two-compartment tank the top of the opening in the dividing wall between compartments must not be greater than 27 inches above the bottom of the tank.

28. When this unit is installed in a two-compartment tank the top of the dividing wall between compartments must be at least three inches above the liquid level.

29. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 900 gallons.

30. When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 44 inches, the volume of the upstream tank must be at least 600 gallons.

31. When this unit is installed in a single compartment tank that is not located downstream of another treatment tank, and the liquid level in the tank is less than 44 inches, the volume of the tank must be at least 1500 gallons

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- 1387** — The elevation of the system's infiltrative surface must be above the estimated highest groundwater elevation or bedrock by the distance prescribed in column entitled "Fecal Coliform >10000 cfu/100 ml" in Table Comm 83.44-3, Wis. Adm. Code.
- 1388** — When this product is installed in a septic tank, the outlet baffle of the septic tank must have installed an effluent filter, which is capable of filtering particles of 1/32 inch in size or larger.
- 1389** — This product may have its sintered air stones installed in a distribution box, seepage pit, dose tank, or the most downstream septic tank.
- 1390** — When this product has its sintered air stones installed in a septic tank, a properly licensed person must perform the installation.
- 1391** — A state Sanitary Permit must be obtained when this product is installed in a septic tank that is required to have an effluent filter installed, which is capable of filtering particles of 1/32 inch in size or larger.
- 1392** — A copy of this approval letter and the manufacturer's printed installation instructions must be supplied to the buyer of this product.
- 1393** — This product may be used on PVC gravity flow DWV pipe without primer.
- 1394** — The gallon capacity per inch of the NORWESCO 500 gallon dose tank is shown in the table below.

Height from pump base	Gallons capacity	Height from pump base	Gallons capacity	Height from pump base	Gallons capacity
1	13	17	185	33	410
2	20	18	199	34	422
3	28	19	213	35	434
4	36	20	227	36	445
5	45	21	242	37	456
6	54	22	256	38	466
7	64	23	271	39	476
8	74	24	295	40	485
9	85	25	308	41	594
10	96	26	321	42	503
11	108	27	335	43	511
12	120	28	348	44	518
13	133	29	361	45	525
14	145	30	373	46	531
15	158	31	386	47	537
16	172	32	398		

- 1395** — This product is approved to use the following:
- Four inch discharge opening in riser.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Manhole riser and cover having a rectangular, round, or square shape with a minimum 24" inside dimension.
- 1396** — This product may be installed for the following uses:
- a. Drain piping . . . . . Pressurized
  - b. Sanitary Sewer . . . . . Gravity flow
  - c. Storm Sewer . . . . . Gravity flow
  - d. Water service and private water main

## APPROVAL STIPULATIONS

- 1397** — 2" and 3" sizes of Series 4000 pipe must be labeled with ductile iron pipe size (DIPS), dimension ratio (DR), pressure class PSI (PC), DRISCOPLEX 4000, AWWA C901, PE 3408, ASTM F714, NSF-61, C3, plant code & extruder (PC#), production date (d/m/y), operator # & shift code (# Letter), resin code (letter).
- 4" and up sizes of Series 4000 pipe must be labeled with ductile iron pipe size (DIPS), dimension ratio (DR), pressure class PSI (PC), DRISCOPLEX 4000, AWWA C906, PE 3408, ASTM F714, NSF-61, C3, plant code & extruder (PC#), production date (d/m/y), operator # & shift code (# Letter), resin code (letter).
- 2" and 3" sizes of Series 4100 pipe must be labeled with iron pipe size (IPS), dimension ratio (DR), pressure class PSI (PC), DRISCOPLEX 4100, AWWA C901, PE 3408, ASTM F714, NSF-61, C3, plant code & extruder (PC#), production date (d/m/y), operator # & shift code (# Letter), resin code (letter).
- 4" and up sizes of Series 4100 pipe must be labeled with iron pipe size (IPS), dimension ratio (DR), pressure class PSI (PC), DRISCOPLEX 4000, AWWA C906, PE 3408, ASTM F714, NSF-61, C3, plant code & extruder (PC#), production date (d/m/y), operator # & shift code (# Letter), resin code (letter).
- 1398** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - A concrete panel slid into a groove in the sidewalls to create a 2 compartment septic tank to aid in the settling out of solids in the effluent.
  - 20" Riser and Cover (3009 & 3009-RC) and 24" Riser and Cover (3008 & 3008-RC) by Polylok.
- 1399** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.

## APPROVAL STIPULATIONS

- 1400** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - 20" Riser and Cover (3009 & 3009-RC) and 24" Riser and Cover (3008 & 3008-RC) by Polylok.
- 1401** — The maximum flow through the lined pipe must not exceed the flow permitted for the unlined pipe determined by the pipe sizing tables or methods recognized in Comm subch. 82.30 or 82.36 multiplied by the percent of flow reduction of the lined pipe. The percent of reduction of the lined pipe shall be determined by using the following formula.
- $$\% \text{ of reduction} = [1 - (Q \text{ of lined pipe} / Q \text{ of unlined pipe})] \times 100$$
- Where Q = Quantity rate of flow in cubic feet per second, fps
- Q is determined by use of the following formula.
- $$Q = A \times (1.486/n) \times R \text{ to the } 2/3 \text{ power} \times \text{square root of } S$$
- Where: Q = Quantity rate of flow in cubic feet per second, fps  
A = Cross-sectional area of flow in square feet, sq.ft.  
n = A coefficient representing roughness of pipe surface, degree of fouling and pipe diameter.  
R = Hydraulic radius (hydraulic mean depth of flow, pipe diameter / 4) in feet, ft.  
S = Hydraulic slope of surface of flow in feet per foot, ft./ft.
- 1402** — The product must be installed in accordance with the manufacturer's printed installation instructions.
- 1403** — This product must be labeled with Performance Liner on the product.
- 1404** — The maximum daily wastewater flow, which may discharge through this product, is 800 gallons per day.
- 1405** — When this product is installed as a 2-compartment septic or grease interceptor tank, septic/pump tank, or septic/siphon tank as baffle must be installed on the outlet of the first compartment of the tank in addition to the baffles shown on the approved drawings.

## APPROVAL STIPULATIONS

- 1406** — Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will produce effluent with the following average values when the influent applied to this product has average daily flow of 2500 gallons per day with the following values for BOD5, TSS, TKN, FOG, and Fecal Coliform.

### Influent into the Most Upstream Septic Tank

Characteristic	Average
BOD5	450 mg/L
TSS	503 mg/L
TKN	70 mg/L
FOG	164 mg/L
Fecal Coliform	100,000,000 cfu/100 ml

### Effluent from the AX100 Unit

Characteristic	Average
BOD5	30 mg/L
TSS	30 mg/L
TKN	30 mg/L
FOG	5 mg/L
Fecal Coliform	10,000 cfu/100 ml

## APPROVAL STIPULATIONS

- 1407** — Design, Installation, Inspection and Maintenance for this product must comply with the following conditions.
1. The treatment system requires a primary septic tank and recirculation-blend tank.
  2. Sizing of septic tank must be based on DWF times HRT noted in Orenco Systems, Inc. Primary Tank Sizing Chart in Orenco Systems Inc. publication NDA-TNK-1 (Rev. 1.1 3/28/02 entitled Primary Tank Sizing.
  3. The septic tank effluent and filtrate from the AX100 pod units must enter the recirc-blend tank at the opposite end of the pump discharge to the AX100 pod units. Alternately, the filtrate may be returned in full or partial flow.
  4. Volume of the recirculation tank must be least 80% of the peak flow.
  5. Recirculation ratios and length of dose event must be in conformance to Timer settings as calculated in accordance with the engineered plans.
  6. Flow equalization must be included in the design of the primary tank when serving facilities that have large flow fluctuations in daily flows. I.e. Churches, schools, and campgrounds.
  7. This product must be installed in conjunction with Orenco Systems, Inc. ProSTEP pump package, automatic distributions valve assemblies, and Recirculating splitter valve.
  8. The residual pressure at each nozzle must be set at 4.5 psi.
  9. The design of the pressure system serving the nozzles must be calculated using a flow of 1.57 gpm/nozzle.
  10. When this product is installed for denitrification, the volume of the recirculation-blend tank(s) must be at least 100% of the peak design flow.
  11. Additionally, when Total Nitrogen reduction is required, all, or a portion, of the AdvanTex filtrate must be routed to the primary tank. When a portion of the filtrate is routed to the primary tank (i.e., approx. 80%) approx. 20% will return to the recirculation-blend tanks through the recirc-splitter valve to accommodate normal daily flow.
  12. Each tank that is utilized in the installation of this product must pass a water tightness test after installation. The water tightness test must comply with s. Comm 84.25 (2) of the Wis. Adm. Code.
  13. An Orenco Systems, Inc. representative must be present at the start up for all systems serving public facilities.
  14. When this product serves public facilities, the control panel serving this product must be a remote telemetry control panel connected to a dedicated phone line.
  15. The installation of this product must comply with Orenco Systems, Inc. publication NIM-ATX-AX-2 (Rev. 1.0, 2/03) entitled AdvanTex-AX100 Treatment System Installation Guide.
  16. Any design that is not within the limits of this approval must be approved by Orenco Systems, Inc. and approved as an Individual Site Design by the Department of Commerce.

## APPROVAL STIPULATIONS

- 1408** — THE FOLLOWING PRODUCTS ARE ACCEPTABLE FOR INSTALLATION REQUIREMENTS IN ZONES A, B, C AND D - ASTM D-1785 3/4" SCH 40, SCH 80, SDR 21 17, AND 13.5 WITH R-19 INSULATION; ASTM D-1785 1" SCH 40, SCH 80, SDR 21, 17, AND 13.5 WITH R-18 INSULATION; ASTM D-1785 OR ASTM D-2665 2" SCH 40, SCH 80, SDR 26, 17, AND 13.5 ZONE D WITH R-21 INSULATION; ASTM D-1785 OR D-2665 3" SCH 40, SCH 80, SDR 32.5, 26, 21, 17, 13.5 WITH R-17 INSULATION; ASTM F-891 3" SCH 40 CELLCORE WITH R-17 INSULATION; ASTM D-3034 4" SDR 26 WITH R-22 INSULATION AND ASTM D-3034 10" SDR 41, 35, 26 WITH R-16.5 INSULATION
- 1409** — THE FOLLOWING PRODUCTS ARE ACCEPTABLE FOR INSTALLATION REQUIREMENTS IN ZONES A, B, AND C - ASTM D-1785 OR ASTM D-2665 1-1/2" SCH 40, SCH 80, SDR 26, 21, 17, AND 13.5 WITH R-15 INSULATION; ASTM D-1785 OR ASTM D-2665 2" SCH 40, SCH 80, SDR 26, 17, AND 13.5 WITH R-13 INSULATION; ASTM D-1785 OR ASTM D-2665 4" SCH 40, SCH 80, SDR 41, 32.5, 26, 21, 17, 13.5 WITH R-13 INSULATION; ASTM D-3034 4" SDR 35, 26 WITH R-15 INSULATION; ASTM D-1785 OR ASTM D-2665 6" SCH 40, SCH 80, SDR 32.5, 26, 21, 13.5 WITH R-13 INSULATION; ASTM D-3034 6" SDR 35, 26 WITH R-14 INSULATION AND ASTM D-3034 8" SDR 41, 35, 26 WITH R-14 INSULATION
- 1413** — When this product receives wastewater quality with a maximum monthly average value for BOD5 of less than or equal to 220 mg/L, TSS of less than or equal to 150 mg/L TSS and F.O.G. of less than or equal to 30 mg/L the effluent from this product will have a fecal coliform value of less than or equal to 10,000 cfu/100ml.
- 1414** — This product must be installed downstream of treatment tank(s) recognized by this department to treat G.P.D. flow that will discharge to this product.
- 1415** — Access located at least 3 inches above finished grade must be provided for this tank.
- 1416** — NORWECO Blue Crystal residential disinfecting tablets must be installed in this product at all times.
- 1417** — This product requires servicing at 6 month intervals for as long as the unit or component remains in service.
- 1418** — A copy of the owner's responsibilities as stated in Comm 83.52, Wis. Adm. Code, must be given to the owner of the tank.
- 1419** — The bell shall be installed on the pipe by the manufacturer with the use of 3" x 3/8" flat gasket.
- 1420** — Pipe to pipe joints in 12" through 36" diameter pipe must be made with one o-ring located in the lower flute nearest to the pipe end.
- 1421** — Pipe to pipe joints in 42" and 48" diameter pipe must be made with a 7" x 3/8" flat gasket installed on the spigot end with the gasket covering the two flutes nearest to the pipe end and two o-rings located over the flat gasket. One o-ring must be installed in each of the flutes that the flat gasket covers.
- 1422** — Joints between fittings and pipe must be made with H-12 double bolt, bar and strap with back up plate and profile gasket hugger band and o-ring gaskets or the 5-C band consisting of a five corrugated wide section of 2-2/3" x 1/2" rolled band with a strip of 2" x 1/8" roll caulk applied to the overlap section of the band and a 12" wide 3/8" flat neoprene gasket.
- 1423** — This product may be installed in dispersal cells in place of stone aggregate specified in approved POWTS Component Manuals or Department approved systems. When the distribution cell is not sized based on the EISA rating, the dispersal cell area must be equal to or greater than the area required for stone aggregate.
- 1424** — This product must be installed with the inlet invert of the distribution cell piping at least 6 inches above the infiltrative surface of the distribution cell.

## APPROVAL STIPULATIONS

- 1425** — An accessible means of disconnect is provided in the pump discharge piping by the use of a quick disconnect fitting, union or compression fitting.
- 1426** — The installation of this system must comply with the remainder of s. Comm 82.30 (11) (f) 2. including the full flow curb stop and check valve. The curb stop shall be installed on the property as close as possible to the connection to the common forced main sewer. The check valve shall be accessible for maintenance.
- 1427** — The connection of the public sewer must also comply with the conditions of approval for the public sewer granted by the Department of Natural Resources under s. 281.41, Stats.
- 1428** — When this product is installed, registration of the Watts Series 008QT Spill-Resistant Pressure Vacuum Breaker must be made with the department in accordance with s. Comm 82.20 (1)(c) of the Wis. Adm. Code.
- 1429** — The installation of the flexible fixture drain serving this product must be installed in such a manner that the drain will drain by gravity to the fixture trap serving this product when the product is at any height.
- 1430** — The fixture trap serving this product must be located as close as practicable and be at least 3" in size.
- 1431** — This product is approved to use the following:
- Press Seal "Cast-A-Seal" gaskets
  - Dual or triple inlets at end of tank with one access or multiple openings above each inlet.
  - Dual or triple outlets end of tank with one access or multiple openings above each outlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Tuf-Tite manhole risers and covers.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - E-Z Set Risers models 2406, 2412 and 3012 cast in concrete tank cover
- 1432** — When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is at least or more than 48 inches, the volume of the upstream tank must be at least 1406 gallons.
- When this unit is installed in a single compartment tank located downstream of another treatment tank, and the liquid level in the upstream tank is less than 48 inches, the volume of the upstream tank must be at least 1688 gallons.
- 1441** — This product must be located and the system sized in accordance with Table 1.

### STUDOR REDI-VENT

Table 1

Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance of Vent to Connection of Air Admittance Valve		
	1-1/4" Vent Diameter	1-1/2" Vent Diameter	2" Vent Diameter
1	35	NL (see note b)	NL
3	28	140	NL
6	NP (see note c)	100	200

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code  
b: NL means no limit  
c: NP means not permitted

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- 1442** — Joints between fittings and pipe must be made with 5-C band with a 12" wide 3/8" flat neoprene gasket and a strip of 2" x 1/8" roll caulk applied to the overlap section of the band.
- 1443** — Joints between pipe and pipe or fittings and pipe must be made with H-12 double bolt, bar and strap with back up plate and profile gasket hugger band and o-ring gaskets or the 5-C band consisting of a five corrugated wide section of 2-2/3" x 1/2" rolled band with a strip of 2" x 1/8" roll caulk applied to the overlap section of the band and a 12" wide 3/8" flat neoprene gasket.
- 1444** — This product must be labeled with the manufacturer name and part number in a visible location after installation.
- 1447** — This product uses one or two anti-siphon fill valves for means of protection of the water supply.
- 1448** — A sedimentation tank or compartment with a minimum capacity of 500 gallons must be located upstream of the tank or compartment in which the 0.9 Bio-Microbics unit is installed.
- 1449** — The distance from top of tank cover to centerline of pipe outlet for the Bio-Microbics treatment unit must be 15 inches.
- 1450** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Cast-A-Seal by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Dual outlets.
  - Inlet and outlets on opposite sides of tank.
- 1451** — When this product has installed two 3.0 MICRO FAST units and receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- 1452** — When this product has installed two 3.0 HIGH STRENGTH FAST units and receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L.
- 1453** — A settlementation tank with a capacity of 3000 gallons must be located upstream of the this product.
- 1454** — This product must bear legible markings to identify the manufacturer and actual or maximum flow rate at 60 psig.
- 1455** — Packaging for this product must be marked with the manufacturer's name and model number, "A112.18.1" and "\_\_\_ gpm."
- 1457** — Based on testing data submitted and reviewed by the department, this approval recognizes that this plumbing product will reduce the concentration of Total Kjeldal Nitrogen (TKN) up to 70%.
- 1458** — The Mixing Panel serving this product must be mounted at a height that will place the critical level of the vacuum breakers serving the hand held shower and disinfectant injector at a elevation of at least 6 inches above the following:
1. Highest use of the hand held shower and
  2. Point of injection of the disinfectant.

## APPROVAL STIPULATIONS

- 1459** — This product must be installed downstream of adequately sized POWTS treatment tank(s).
- 1460** — This product is not required to have a baffle installed on the inlet.
- 1461** — This product must have an approved effluent filter installed on the outlet.
- 1462** — The entire system must be designed and installed in accordance with the 1997 copyright Design Manual No. 1001/o Sovent Single Stack DWV requirements and recommendations.
- 1463** — This product (pipe and fittings) must conform to ASTM standard F1986-00a.
- 1464** — The pipe must be labeled with the manufacturer's name, product name, "PE-Xb / AL / PE-HD", size (in inches), 145PSI @ 180F, NSF-pw, ASTM F1986. The fittings must be labeled with the manufacturer's name and size (in metric).
- 1465** — This product may be installed as an outlet baffle of septic tanks or compartments that have a maximum daily flow rate of no more than 4000 gallons per day.
- 1466** — The pipe must be labeled with the manufacturer's name or trademark, nominal pipe size, ASME A112.3.1, and date of manufacture. The fittings must be labeled with the manufacturer's name or trademark and nominal pipe size.
- 1467** — Installation of this product must be in accordance with ASME Standard A112.3.1-1993.
- 1469** — The manufacturer's equipment models T-15D, T-30, T-50, T-60, T-D 35 and PLUS 100 must be used for drilling a hole in copper and creating a cup-shaped collar for connection of a branch.
- 1470** — Model N-42 OR ND-54 T-DRILL notcher must be used to notch and dimple the branch to act as a stop and assist in proper alignment for branch sizes under two inches. Two inch and larger branches must be notched and dimpled by hand in accordance with the manufacturer's instructions.
- 1471** — The 1-inch diameter drain from this product must directly connect to a properly size, trapped and vent sanitary drain located within a developed length of 10 feet.
- 1472** — The pipe must be labeled at intervals of no more than 3.5 meters (11.5 ft) with the manufacturer's name or trademark, nominal pipe size (inches/mm), AASHTO designation (M-252 or M-294), plant designation/code, and date of manufacture.
- 1473** — The air admittance valve must be an approved product by this office and installed in accordance with its approval by this office.
- 1474** — The sensory deprivation tank must be a model that has undergone experimental evaluation by the Department of Health in the past and has been found to be safe for use in a commercial setting by the Department of Health and Family Services.
- 1475** — If bacteriological, chemical or clarity standards of the water, as prescribed by the Department of Health and Family Services, can not be met and maintained as required in this approval, this approval will be considered rescinded at that time.
- 1476** — A bacteriological monitoring program must be established and followed as required by the Department of Health and Family Services at the issuance of the initial operation license.
- 1477** — The tank must be installed as required by the manufacturer.
- 1478** — The turnover time for each unit must not exceed 10 minutes and must be recirculated continuously except when occupied.
- 1479** — Ventilation shall be required as per Chapter 12 of the Wisconsin Enrolled Commercial Building Code.
- 1480** — A minimum of one public water closet and lavatory shall be available to patrons within the facility and a shower shall be available within the room where each unit is installed.

## APPROVAL STIPULATIONS

- 1481** — Drinking water shall be provided at the facility by either a drinking fountain or a bottled water-dispensing unit.
- 1482** — Plans are not required to be submitted to Safety and Buildings for each installation, however, the installation shall be licensed by the Department of Health and Family Services as a public swimming pool prior to use.
- 1483** — This product may only be used in conjunction with Olymp LavaSit Synchro shampoo sink.
- 1484** — The fixture drain hose must be installed within 45 degrees of plumb.
- 1485** — This product may only be used with the EHS-Environmental / Health Products & Service's Moving Bed Biofilm Reactor System.
- 1486** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with an access opening above each inlet.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Low end and side pipe openings for pump, siphon and holding tanks.
  - Top inlet opening for holding, pump, or siphon tanks.
  - Six inch inlet and outlet openings.
  - ADS N-12 Prolink Pipe as a manhole riser and cover using an ADS coupler to join manhole riser sections together.
  - Press Seal "Cast-A-Seal" gaskets.
  - Installation of UV disinfection unit Model "The Disinfector" manufactured by UV "The Disinfector" Inc., installed in accordance with the product approval for the UV disinfection unit.
- 1487** — This product must be installed in accordance with the manufacturer's installation instructions and the following requirements:
1. Mechanical fasteners must be used to mount the STF-AR24 Adapter Ring to top of tank.
  2. Silicone rubber sealant must applied to the horizontal joint between riser sections.
  3. A minimum of three 1 to 1-1/4 inch #8 or #10 stainless steel screws must be used to secure the bottom and top riser sections together. The screws must be equally spaced around the riser.
  4. Risers must be backfilled with sand or installed with a frost shield.
  5. An acceptable locking device must be used to secure riser cover.

# APPROVAL STIPULATIONS

- 1495** — Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or syphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

TABLE HLXT-1  
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)																		
	1/2		3/4		1			1-1/4											
	WSFU		WSFU		WSFU			WSFU											
	GPM	FT	GPM	FT	GPM	FM	FT	GPM	FM	FT									
0.5	0.5	0.5	1.5	1.5	3.0	-	3.0	6.5	-	8.0									
1	1.0	1.0	2.0	2.0	4.5	-	5.0	10.0	4.0	13.0									
2	1.0	1.0	3.0	3.0	6.5	-	8.0	14.5	4.5	20.5									
3	1.5	1.5	4.0	4.0	8.0	-	10.0	18.0	6.0	26.5									
4	2.0	2.0	5.0	6.0	9.5	-	12.5	21.0	7.0	32.0									
5	2.0	2.0	5.5	6.5	11.0	4.0	15.0	23.0	7.5	37.0									
6	2.5	2.5	6.0	7.0	12.0	4.0	16.5	26.0	9.0	45.0									
7	2.5	2.5	6.5	8.0	13.0	4.5	18.0	28.0	11.0	50.0									
8	3.0	3.0	7.0	9.0	14.0	4.5	20.0	30.0	14.5	57.0									
9	3.0	3.0	7.5	9.5	15.0	5.0	21.5	NP											
10	3.5	3.5	8.0	10.0	16.0	5.0	23.0												
11	3.5	3.5	8.5	10.5	16.5	5.5	24.0	NP											
12	3.5	3.5	9.0	11.5	17.0	5.5	25.0												
13	4.0	4.0	9.0	11.5	NP														
14	4.0	4.0	9.5	12.5															
15	4.0	4.0	10.0	13.0	NP														
16	4.5	5.0	10.0	13.5															
17	4.5	5.0	NP																
18	4.5	5.0																	
19	5.0	6.0	NP																
20	NP																		

## APPROVAL STIPULATIONS

- 1498** — Pipe sizing for this product must comply with Tables HLXT-1 or 2 entitled Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150). Table notes: WSFU means water supply fixture units, GPM means gallons per minute, FM means predominately flushometer type water closets or syphon jet urinals, FT means predominately flush tank type water closets or wash down urinals, and NP means not permitted.

**TABLE HLXT-2**  
Maximum Allowable Load for Harvel LXT PVC, Sch. 80; (C=150)

Pressure Loss Due to Friction (in lbs. per 100 ft. of Length)	Pipe Diameter (in Inches)								
	1-1/2			2			3		
	WSFU			WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT	GPM	FM	FT
0.5	10.5	4.0	14.0	20.5	6.5	31.0	60.0	75.0	175
1	15.0	5.0	21.5	30.0	13.5	55.0	87.0	180.0	310
2	22.0	7.0	35.0	44.0	36.0	106.0	127.0	406.0	511
3	27.0	10.0	47.0	55.0	62.0	150.0	159.0	615.0	688
4	32.0	16.0	60.0	64.0	86.0	195.0	160.0	627.0	697
5	36.0	22.0	73.0	71.0	114.0	233.0	NP		
6	40.0	30.0	86.0	NP					
7	42.0	34.0	102.0						
8	NP								

  

	4			6		
	WSFU			WSFU		
	GPM	FM	FT	GPM	FM	FT
0.5	125	393	500	369	2444	2444
1	183	800	829	537	4176	4176
2	266	1490	1490	636	5935	5965
3	280	1626	1626	NP		
4	NP					

- 1499** — This product must be installed in accordance with Harvel's installation instructions printed in the Harvel LXT HPB-114, Revised 5/15/02, product brochure.
- 1500** — The piping must be labeled with HARVEL LXT, pipe size in inches, SCH 80, and Trace number (i.e.: 6 2303 1).
- 1501** — This product may be installed at a depth that exceeds the maximum depth stated in the regarding block of this approval, when the manufacturer provides in writing that the proposed installation depth is acceptable for the individual installation.
- 1503** — This product must be labeled with the manufacturer's name and model number in a location that is accessible.
- 1505** — This product must be installed with the optional 20" diameter Poly Riser terminating at or above finished grade.
- 1506** — The maximum depth of the treatment tank of this product is 30 inches.
- 1507** — Model 7140Y04 must be installed in a horizontal drain line that is at least 9 inches below the fixture outlets to which it is protecting.
- 1508** — Model 7140Y06 must be installed in a horizontal drain line that is at least 14 inches below the fixture outlets to which it is protecting.
- 1509** — A manhole extending to at least 4 inches above finished grade must be provided over the effluent filter.

## APPROVAL STIPULATIONS

- 1510** — This product must be installed in the second compartment of a septic tank or in the second half of a single compartment septic tank.
- 1511** — The outlet baffle of the septic tank, which has this product installed, must have installed an effluent filter capable of filtering particles of 1/8 inch in size or larger.
- 1512** — This product must be installed by a properly licensed plumber.
- 1513** — A state Sanitary Permit must be obtained when this product is installed.
- 1514** — The IOS-500 inoculant must be exchanged at least on an annual basis.
- 1515** — The tank is not recommended to be installed where saturated soil or seasonal high ground water tables are indicated between the bottom of the tank and the ground surface.
- 1516** — The tank shall not be buried greater than 36 inches below grade.
- 1517** — This tank must be set on approximately 6 inches of pea gravel or sand in the bottom of the excavation.
- 1518** — Backfill material soil shall flow freely into corrugations between tank ribs. The backfill must be compacted in 6 inch lifts.
- 1519** — This product may be installed using the following inlet/out combinations. End of first compartment to End of second compartment; End first compartment to either Side of second compartment; Either Side first compartment to End of second compartment; Either Side of first compartment to either Side of second compartment.
- 1520** — This product must be labeled with the 18" FREEDOM FP1 12454-B SDR 26 PS 115 PVC SEWER PIPE ASTM F-679 HEAVY ALL PIPE LINE # DATE SHIFT J or 18" FREEDOM FP1 12454-B SDR 35 PS 46 PVC SEWER PIPE ASTM F-679 LINE # DATE SHIFT J.
- 1521** — 18" FREEDOM FP1 12454-B SDR 35 PS 46 PVC SEWER PIPE ASTM F-679 may only be used as gravity flow Effluent piping, Sanitary building sewer or Storm sewer pipe.
- 1522** — Pipe and fittings sizes of 12" through 60" shall meet AASHTO Standard M-294 and be labeled with Hancor Logo, Pipe Size, Date Code, AASHTO M-254. The maximum space between labels on pipe must not exceed 11.5 feet. Each fitting shall be labeled.
- 1523** — The fittings must be labeled with Spears, NSF pw PVC1, pipe size in inches, SCH 80, and part number.
- 1524** — This product must be installed in accordance with Spears installation instructions printed in the Spears LXT-4-0802 product brochure, Effective 8/02.
- 1525** — Reduced Pressure Principle Backflow Preventer listed to ASSE 1013 or CAN/CSA B64.4 or a Back Siphonage Vacuum Breaker listed to ASSE 1056 must be installed in cold, hot and pure water supply pipes serving this product.

## APPROVAL STIPULATIONS

- 1526** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with an access opening above each inlet.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Low end and side pipe openings for pump, siphon and holding tanks.
  - Top inlet opening for holding, pump, or siphon tanks.
  - Six inch inlet and outlet openings.
  - ADS N-12 Prolink Pipe as a manhole riser and cover using an ADS coupler to join manhole riser sections together.
  - Press Seal "Cast-A-Seal" gaskets.
  - Installation of UV disinfection unit Model "The Disinfector" manufactured by UV "The Disinfector" Inc., installed in accordance with the product approval for the UV disinfection unit.
  - Zoeller Pump Co. Septic Tank Outlet Filter and Polylok Septic Tank Outlet Filter Model No. P1-122.
- 1527** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with an access opening above each inlet.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Low end and side pipe openings for pump, siphon and holding tanks.
  - Top inlet opening for holding, pump, or siphon tanks.
  - Six inch inlet and outlet openings.
  - ADS N-12 Prolink Pipe as a manhole riser and cover using an ADS coupler to join manhole riser sections together.
  - Press Seal "Cast-A-Seal" gaskets.
  - Zoeller Pump Co. Septic Tank Outlet Filter and Polylok Septic Tank Outlet Filter Model No. P1-122.

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- 1528** — This product is approved to use the following:
- Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with an access opening above each inlet.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Low end and side pipe openings for pump, siphon and holding tanks.
  - Top inlet opening for holding, pump, or siphon tanks.
  - Six inch inlet and outlet openings.
  - ADS N-12 Prolink Pipe as a manhole riser and cover using an ADS coupler to join manhole riser sections together.
  - Zoeller Pump Co. Septic Tank Outlet Filter and Polylok Septic Tank Outlet Filter Model No. P1-122.
- 1529** — Location of flow through openings of Drain Basins, Road and Highway structure type inlets basins and Drain Basin / Curb Inlet Drain structure type inlets basins may be at variable elevations and/or locations around the axis of the basin in accordance with manufacturer's specifications noted on drawings numbered 7001-110-012, 7001-110-013, 7001-110-014 entitled 8" and 15" Minimum Angle Between Adapters, 18" and 24" Minimum Angle Between Adapters and 30" Minimum Angle Between Adapters, respectively.
- 1530** — All connections to storm sewer piping shall be made with the use of watertight adapters.
- 1531** — All storm sewer materials shall comply with applicable standards referenced in Comm 84 of the Wisconsin Administrative Code.
- 1532** — When this system is installed without clean outs as required by s. Comm 82.35, Wisconsin Administrative Code, the system must be cleaned by the use of vacuum or jetting system.
- 1533** — Approval is issued for this product as being equivalent to a floor outlet water closet when the fixture drain is installed in the vertical position. The design meets the intent of s. Comm 82.32 (5) (c) and 84.20 (5) (n), Wis. Adm. Code, which requires water closets to discharge through a minimum diameter 3" drain pipe or fitting and the bowl to conform to ANSI Standard A112.19.2M. The intent of the code is met since this product provides the same functional performance as water closets that meet ANSI Standard A112.19.2M.
- 1535** — Pipe hangers and supports on continuous spans of uninsulated line carrying fluids of specific gravity of 1.0, must not exceed intervals greater than those specified in Table 1 entitled Spears DWV CPVC Support Spacing.

Table 1  
Spears DWV CPVC Support Spacing (ft.)  
Schedule 40 CPVC  
Temperature (Fahrenheit)

Pipe Size (in.)	100	120	140	160	180	200	210
1-1/2	6	5-1/2	5	3-1/2	3	2-1/2	2
2	6	5-1/2	5	3-1/2	3	2-1/2	2
3	7	7	6	4	3-1/2	3	2-1/2
4	7-1/2	7	6	4-1/2	4	3-1/2	3
6	8	7-1/2	6-1/2	5	4-1/2	4	3-1/2
8	9	8-1/2	7	5-1/2	5	4-1/2	4

## APPROVAL STIPULATIONS

- 1536** — This approval applies only when connecting an under counter dishwasher to the plumbing system via a hose threaded outlet.
- 1537** — This approval only applies to under counter dishwashers listed as compliant to ASSE 1004 and NSF 3 by a recognized listing agency acceptable to the department of Commerce.
- 1538** — This product must be maintained at least annually.
- 1539** —
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - A concrete panel slid into a groove in the sidewalls to create a 2 compartment septic tank to aid in the settling out of solids in the effluent.
  - 24" riser by EZ Set Tank Company
- 1540** — This product must be labeled with size and product description (tee, wye, ell, etc.) in permanent yellow lettering and numbers painted on the exterior surface of the fitting.
- 1543** — These products may be installed for the following uses:
- a. SingleTrap - Infiltration or Detention
  - b. DoubleTrap - Detention or Sewer
- 1544** — The joints of SingleTrap or DoubleTrap product must be sealed in accordance with the following:
- The horizontal joint around the perimeter of the system must be sealed with a flexible butyl resin sealant that complies with ASTM Standard C990; and
  - All other exterior joints must be sealed with a minimum 12" wide plastic film and mesh reinforced mastic band that complies with ASTM Standard C877 Type II.
- 1545** — The installation of SingleTrap product as a stormwater infiltration system must be installed on concrete footings in accordance with the manufacturer's installation instructions.
- 1546** — The installation of SingleTrap product as a stormwater detention system must be installed on a concrete slab in accordance with the manufacturer's installation instructions.
- 1547** — This product must be labeled with the follow information; StormTrap logo, Unit type (I, II, III, or IV), and IDOT and NPCA approved.
- 1548** — When this product is used as a grease interceptor, the inlet baffles must extend below the liquid level to a point equal to 1/3 of the liquid depth of the compartment that the baffle is installed in and the outlet baffles must extend below the liquid level to a point equal to 2/3 of the liquid depth of the compartment that the baffle is installed in. There must also be an inspection opening over all baffles that do not have a manhole of the baffle.
- 1549** — Approval is issued for this product because the design of the product meets and/or exceeds the requirements of adopted standards for this product.

## APPROVAL STIPULATIONS

- 1550** — The POWTS treatment tank that this product is installed in must comply with the following calculations.

\_\_\_\_\_ ST (Required septic treatment capacity in gallons)  
\_\_\_\_\_ RC (Reserve capacity in gallons)  
\_\_\_\_\_ TTR (Total tank volume requirement in gallons)  
\_\_\_\_\_ IUI/C (Inches under inlet, calculated)  
\_\_\_\_\_ IUI/M minus IUI/C (must be greater than zero)  
\_\_\_\_\_ MSD (Minimum system vertical dimension between the inlet invert and inside bottom of tank for filter STEP system to work under the inlet)  
\_\_\_\_\_ IUI/M (Inches under inlet, measured, must be equal to or greater than MSD)  
\_\_\_\_\_ TTR/GPI (must be equal to or less than IUI/M)

Where:

ST equals the Estimated Daily Wastewater Flow in accordance with  
Comm 83.43 x 1.5 x 2.088

RC equals the Estimated Daily Wastewater Flow in accordance with Comm 83.43

TTR equals the sum of ST+ RC + SDV + DBV + A

SDV equals the single dose volume in gallons

DBV equals the drain back volume in gallons

MSD equals the sum of [(RC + SDV + A] divided by GPI) + 32 inches

A equals the volume between the alarm-on and alarm-off levels in the treatment tank,  
in gallons = vertical distance between alarm-on level and alarm-off level x GPI)

IUI/C equals the calculated inches under inlet determined by dividing TTR by GPI

GPI equals the gallons per inch value assigned to the product approved by Dept. of  
Commerce

IUI/M equals the measured vertical distance in inches between the inlet invert and inside  
bottom of tank and must be equal to or greater to MSD

- 1551** — Each length of pipe must be marked at an interval not to exceed ten feet along the length of the product with an embossed logo or heat stamp including the manufacturer's name (Hancor Inc.), the product size, the manufactured date code, and the specification AASHTO M252. In addition, each section of the pipe shall have a UPC identification sticker attached to the bell end listing the product diameter, length, and product name (SURE-LOK WT) The product will also have a blue protective film over the gasketed spigot end.

All fittings shall have a UPC identification sticker attached, listing the product diameter or description and product name. In addition, each fitting shall have the date of manufacturer hot stamped or writing on the product.

- 1552** — The connection to the supply hose (Synflex 34WH-0630 3/8" 115 PSI WP Certified ANSI NSF 51 Max. Temp 200 F NSF 61 Saint-Gobain) serving this product is made by the use of 3/8" MPT when this product is connected to a spout of a kitchen sink faucet with overhead spray.

- 1553** — This product is approved to use the following:

- Two inch schedule 40 PVC cast in riser for electrical wiring.
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
- Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- Department approved EZ Set and Polylok Inc., 24" riser cast into the tank cover.

## APPROVAL STIPULATIONS

- 1554** — All interior concrete surfaces above the lowest liquid level of this product must have a protected coating that will inhibit the deterioration of the concrete due to internal environmental effects or the concrete used to construct this product must have a water cement ratio not exceeding 0.45.
- 1555** — When this product has an inlet baffle located in the second compartment, an inspection, service, maintenance opening shall be provided over the baffle in accordance with s. Comm 84.25 (7)(a) of the Wisconsin Administrative Code.
- 1556** — This product may be installed for the following drain or vent use(s):
- a. Sanitary sewer . . . . . gravity flow
  - b. Storm sewer . . . . . gravity flow
  - c. Stormwater infiltration piping . . . . . gravity flow perforated
- 1557** — This product is installed for POWTS effluent piping, the product must have 2 rows, and only 2 rows, of perforations parallel to the axis of the pipe and 120 degrees plus/minus 5 degrees apart. The perforations shall be at the nominal 4 and 8 o'clock positions what the pipe is installed.
- 1558** — This product must be labeled with the following information:
- a. Manufacturer's name or trademark
  - b. Date of manufacture
  - c. National standard to which the pipe meets
  - d. Nominal size
  - e. Plant designation
  - f. Production line
- 1559** — This product must be labeled with the following information:
- a. National standard to which the pipe meets
  - b. The letters PE followed by the cell classification
  - c. Nominal pipe outside diameter
  - d. Dimensional ratio or pressure rating
  - e. Manufacturer's name or trademark
  - f. Production code and date of manufacture
  - g. Seal or mark of accredited laboratory indicating the product is suitable for potable water
- 1560** — This product may be installed for the following water use(s):
- a. Water service and private water main
- 1561** — Pipe must have a dimensional ratio of DR9.3, DR9 and DR7.3.
- 1562** — The maximum water supply fixture units allowed for the PEX piping is 8.0 wsfu for 5/8", 11.0 wsfu for 3/4", 20.5 wsfu for 1" and 34.0 wsfu for 1-1/4" tube size.
- 1563** — The water heater relief valve shall discharge in accordance with s. Comm 82.40 (5)(d)5 of the Wisconsin Administrative Code.
- 1564** — Water closets must be of the elongated bowl design in accordance with s. Comm 84.20 (5)(o) of the Wisconsin Administrative Code.
- 1566** — Provide a valve on the water supply pipe that serves only the hose bibb for each of the hose bibbs. This valve is required in accordance with s. Comm 82.40 (4)(c)1, of the Wisconsin Administrative Code.
- 1567** — This product may serve a pumped-discharge type clothes washer standpipe when:
- The standpipe and trap is at least 2" inch in diameter,
  - The fixture drain between the trap and point of vent is at least 2" in diameter, and
  - The fixture drain downstream of the point of vent is at least 3" in diameter.

## APPROVAL STIPULATIONS

- 1568** — This product may not serve as a vent termination point for any of the following.
- Vents installed to relieve positive pressures,
  - vents serving chemical waste system,
  - vents serving POWTS holding tank or, POWTS treatment tank,
  - a stack vent serving two (2) or more branch intervals,
  - a vent stack that is required in accordance with s. Comm 82.31 (4) (a), or
  - a vent serving a sump.
- 1569** — This product is approved to use the following:
- Cast-A-Seal or 8QRS Press-Boot by Press Seal Gasket Corp.,
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Four inch discharge opening in riser.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - AAB waterproofing
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - E-Z Set Risers
- 1570** — Approval is issued for this product because the design of the fixture tail piece meets the intent of s. Comm 84.30 (5) and (6), Wis. Adm. Code. The intent of the code is met since the fixture tail piece provides an acceptable inner wall surface for the waste.
- 1571** — This product must be installed with a liquid level indicator.
- 1572** — When this product is installed with the optional POLYLOK effluent filter(s) model PL-122, this product is recognized to not discharge any solid or suspended solid exceeding 1/8 inch in diameter.
- 1573** — This tank may not be the most upstream tank when it is used as a septic/pump tank.
- 1574** — This chemical dispensing system shall be connected to the water distribution system in either of the following manners:
1. The fixture supply shall be individually connected to the water distribution system.
  2. The fixture supply shall be installed with a pressure bleeding device. The pressure bleeding device shall create a visually free flow of water through the atmosphere from the faucet connection into the fixture drain. The fixture supply must comply with either s. Comm 84.20 (6)(c) and 84.30 (4) or an acceptable backflow preventer must be installed on the inlet of the fixture supply connector and the outlet of the pressure bleeding device.
- 1576** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - WDZ Gasket System by Del Zotto Products Corp.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Del Zotto Plastic riser and cover
  - Polylok PL-122 effluent filter(s)
- 1577** — The manhole cover shall be provided with a locking device that conforms to s. Comm 84.25 (7)(h) of the Wisconsin Administrative Code.
- 1578** — All processing tanks used with AdvanTex Treatment Systems must be approved by Orenco Systems Engineering Department.

## APPROVAL STIPULATIONS

- 1579** — This product may only receive domestic wastewater having a monthly average value of less than or equal to:  
30 mg/L for fats, oils, and grease; 250 mg/L for BOD5; and 75 mg/L for total suspended solids.
- 1580** — Effluent from this product must be discharged to an acceptable POWTS treatment and dispersal component that complies with ch. Comm 83 of the Wisconsin Administrative Code.
- 1581** — When this product receives greater than 300 gallons per day, based on the estimated daily flow as determined by s. Comm 83.43 of the Wisconsin Administrative Code, the influent must be time dosed to this product in accordance with the manufacturer's specifications.
- 1582** — When time dosing is required, the dose must be 10 to 15 gallons per dose.
- 1583** — A 4-inch vent must be joined between the dose chamber, which is dosing this product, and this product in accordance with the manufacturer's installation instructions.
- 1584** — One Ecoflo STB-650 Biofilter may serve up to four bedrooms and two Ecoflo STB-650 Biofilter may serve up to six bedrooms.
- 1585** — When this product receives effluent having a monthly average value of less than or equal to 30 mg/L for fats, oils, and grease; 250 mg/L for BOD5; and 75 mg/L for total suspended solids, the effluent will be equal to or less than 10 mg/L for BOD, 10 mg/L for TSS, and 25,000 cfu/100ml for fecal coliform.
- 1587** — This product may be installed for the following drain or vent use(s):  
a. Sanitary drain and vent piping . . gravity flow underground  
b. Storm drain and vent piping . . . gravity flow underground
- 1588** — This product is approved to be used with the following:  
- Baffle wall, which have two 3 inch vent holes and four 3 inch diameter pass-through holes. The vent holes are located 60 inches above the bottom of the tank. The pass through holes are located 32 inches above the bottom of the tank.  
- The location of the baffle wall must be installed in the first or second rib from the outlet of the tank.  
- Orenco pipe grommets for sealing openings through tank and riser.  
- Orenco fiberglass lid, with or without air vent or lid installation option.  
- Orenco Perma-Loc, Ultra Rib, or Kor flo access risers.

## APPROVAL STIPULATIONS

- 1589** — The gallon capacity per inch of the Orenco 1000 gallon dose tank is shown in the table below.

Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity
4	26	20	307	36	709
5	37	21	330	37	735
6	49	22	353	38	760
7	62	23	377	39	785
8	76	24	401	40	809
9	91	25	425	41	833
10	107	26	450	42	857
11	124	27	475	43	880
12	141	28	501	44	903
13	160	29	527	45	926
14	179	30	553	46	948
15	199	31	579	47	970
16	219	32	605	48	991
17	240	33	631	49	1011
18	262	34	657	50	1031
19	284	35	683	51	1050

- 1590** — Tank weight is approximately 320 pounds for a tank without baffle wall and 350 pounds for a tank with baffle wall.

- 1591** — Installation of this tank must include water tightness testing performed in accordance with the manufacturer's printed instructions as noted in Orenco Fiberglass Tank Installation Instructions for Injection-Molded FRP Tanks publication NIN-TNK-1 Rev. 3.3, copyright 12/04.

- 1592** — The riser lid must be attached to the riser by using tamper proof lid bolts provided by Orenco.

- 1593** — The gallon capacity per inch of the Orenco 1000 gallon dose tank is shown in the table below.

Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity
4	35	20	460	36	1052
5	52	21	495	37	1089
6	70	22	530	38	1126
7	91	23	566	39	1162
8	113	24	602	40	1198
9	136	25	638	41	1234
10	160	26	674	42	1270
11	185	27	711	43	1305
12	211	28	748	44	1340
13	239	29	785	45	1374
14	268	30	823	46	1407
15	298	31	861	47	1439
16	329	32	900	48	1471
17	361	33	939	49	1502
18	393	34	977	50	1532
19	426	35	1015	51	1561

- 1594** — Tank weight is approximately 470 pounds for a tank without baffle wall and 500 pounds for a tank with baffle wall.

## APPROVAL STIPULATIONS

- 1595** — This product must be located:
- a minimum of 4 inches above the top of the horizontal pipe being served (see note a),
  - no more than 20 inches below the flood rim of any fixture served by this product (see note a),
  - at least 6 inches above insulation materials (see note a),
  - in an accessible area,
  - within a ventilated space that allows air to enter the product and has an opening with an area of at least one-inch to the building air or outside air, and
  - in accordance with s. Comm 82.31 (9), Wis. Adm. Code.

Note a: The distance is measured from termination of the vent pipe to the point noted in the stipulation.

- 1596** — This product must be located and the system sized in accordance with Table 1.

Oatey Sure-Vent Models 6 DFU and 20 DFU

Table 1

Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance of Vent to Connection of Air Admittance Valve		
	1-1/4" Vent Diameter (see note b)	1-1/2" Vent Diameter (see note c)	2" Vent Diameter (see note d)
1	35	NL (see note e)	NL
3	28	140	NL
6	NP (see note f)	100	200
20 (see note d)	NP	60	110

- Notes:
- a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code
  - b: No water closets permitted
  - c: Not more than two (2) water closets or similar type fixtures of four (4) or more drainage fixture units.
  - d: Use of model 6 DFU prohibited
  - e: NL means no limit
  - f: NP means not permitted

## APPROVAL STIPULATIONS

- 1597** — This product must be located and the system sized in accordance with Table 1.

Oatey Sure-Vent Models 160 DFU and 500 DFU

Table 1

Maximum Drainage Fixture Units Served (see note a)	Maximum Developed Distance of Vent to Connection of Air Admittance Valve in feet				
	Diameter of vent in inches				
	1-1/4 (see note b)	1-1/2 (see note c)	2	3	4 (see note d)
1	35	NL (see note e)	NL	NL	NL
3	28	140	NL	NL	NL
6	NP (see note f)	100	200	NL	NL
20	NP	60	110	NL	NL
160	NP	NP	25	300	NL
500 (see note d)	NP	NP	NP	125	475

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code

b: No water closets permitted

c: Not more than two (2) water closets or similar type fixtures of four (4) or more drainage fixture units.

d: Use of model 160 DFU prohibited

e: NL means no limit

f: NP means not permitted

- 1598** — This product may have two MicroFAST 0.9 or two HighstrengthFAST 1.0 units installed in the tank.
- 1599** — A minimum 4 x 6 inch permanent label must be affixed to the manhole cover, identifying the interceptor tank with the words GREASE INTERCEPTOR.
- 1600** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four or six inch inlet and outlet openings.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp. and Polylok II High Pressure Pipe Seal by Polylok.
  - Dual inlets at end or side of tank with access opening above each inlet baffle.
  - Four inch discharge opening in riser.
  - 2-1/2 inch threaded nipple cast in riser for electrical wiring.
  - Four, six or eight inch pipe openings located near the bottom of the side or end wall for pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - 4 or 6 inch inlet opening in cover of the tank for holding tank use only to achieve 4189 gallons capacity.
- 1601** — All aboveground epoxy lined piping must be labeled at intervals of not more than 25 feet and at each side where the piping passes through a wall or floor.

## APPROVAL STIPULATIONS

- 1602** — The label is supplied by Ace DuraFlo and contains the following information:
- Attention! Epoxy Lined Piping All repairs or modifications to this pipe must be carried out using flameless technology following the technical procedures and specifications of ACE DuraFlo Systems, LLC and the epoxy manufacturer.
  - ADF Ace DuraFlo the repiping alternative. For more information please call 1-888-775-0220 [www.FixMyPipes.com](http://www.FixMyPipes.com)
  - NSF-PW
  - ADF204
  - ACE DuraFlo 204 Internal Pipe Coating Process
  - UPC
  - DO NOT REMOVE
- 1603** — All repairs or modifications to pipe which has been lined with this product must be carried out using flameless technology and following the technical procedures and specifications of ACE DuraFlo Systems, LLC and the epoxy manufacturer.
- 1604** — This product is limited to piping 1/2 inch in diameter or greater use in pressurized metallic piping systems.
- 1605** — The entire system must be designed and installed in accordance with the 2004 copyright Sovent Cast Iron Single Stack DWV design manual number 802 requirements and recommendations.
- 1606** — The waste from this product must be discharged by means of an air-break or air-gap into a receptor through into a drain connected to the sanitary waste system.
- 1607** — Only the stair rise and tread affected by the gutter drain may vary from the other stair dimensions.
- 1608** — This product is approved as acceptable form of backflow protection of the water supply serving dental units.
- 1609** — The backflow protection devices in this product must be tested at least once per year. The testing must be done in accordance with the manufacturer's testing requirements as noted in their "Annual Backflow Preventer Valve Testing" procedures. Copy of the test results should be recorded and kept at the installation site. Any repairs or replacement of the backflow preventers should be noted on test report.
- 1610** — The discharge rate of the pump must not exceed 40 gallons per minute.

## APPROVAL STIPULATIONS

- 1611** — The gallon capacity per inch of the Orenco 1000 gallon STEP tank is shown in the table below.

Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity
4	26	23	377	42	857
5	37	24	401	43	880
6	49	25	425	44	903
7	62	26	450	45	926
8	76	27	475	46	948
9	91	28	501	47	970
10	107	29	527	48	991
11	124	30	553	49	1011
12	141	31	579	50	1031
13	160	32	605	51	1050
14	179	33	631	52	1062
15	199	34	657	53	1086
16	219	35	683	54	1103
17	240	36	709	55	1119
18	262	37	735	56	1134
19	284	38	760	57	1148
20	307	39	785	58	1161
21	330	40	809	59	1173
22	353	41	833	60	1184

- 1612** — The capacity and float levels must comply with the follow requirements:
1. A treatment zone equal to at least 2.088 times the design wastewater flow entering the tank,
  2. A drawdown zone based on the system design, and
  3. A one-day reserve zone above the high water alarm level based on the estimated wastewater flow.
- 1613** — When this product receives wastewater from dwellings and is used as a septic tank effluent pump system, it will produce an effluent quality with a maximum monthly average value for BOD5 of greater than 30 mg/L and less than or equal to 220 mg/L, TSS of greater than 30 mg/L or less than or equal to 150 mg/L TSS, F.O.G. of less than 30 mg/L and solids of 1/8 inch or less.

## APPROVAL STIPULATIONS

- 1614** — The gallon capacity per inch of the Orenco 1500 gallon STEP tank is shown in the table below.

Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity	Height from tank bottom	Gallons capacity
4	35	23	566	42	1270
5	52	24	602	43	1305
6	70	25	638	44	1340
7	91	26	674	45	1374
8	113	27	711	46	1407
9	136	28	748	47	1439
10	160	29	785	48	1471
11	185	30	823	49	1502
12	211	31	861	50	1532
13	239	32	900	51	1561
14	268	33	939	52	1589
15	298	34	977	53	1615
16	329	35	1015	54	1640
17	361	36	1052	55	1664
18	393	37	1089	56	1687
19	426	38	1126	57	1709
20	460	39	1162	58	1730
21	495	40	1198	59	1748
22	530	41	1234	60	1765

- 1615** — When this product is installed with the "UV The Disinfector" disinfection device and receives wastewater from dwellings and the flow through the UV disinfection does not exceed 6 gallons per minute, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L, and fecal coliform of less than or equal to 10,000 cfu/100ml.
- 1616** — This product may be installed with PolyLok effluent filter model PL-122, and/or the "UV The Disinfector" disinfection device in accordance with the manufacturer installation instructions.
- 1618** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Department approved plastic risers and covers installed as required by product approval for the plastic risers and covers with the first riser cast into cover at time of tank production.

## APPROVAL STIPULATIONS

- 1619** — This product is approved to use the following:
- Department approved plastic risers and covers installed as required by product approval for the plastic risers and covers with the first riser cast into cover at time of tank production.
  - Conduit hole cast in riser for electrical wiring.
  - Polylok IV High Pressure Pipe Boot Seal by Polylok.
  - Four inch cast iron or schedule 40 ABS or PVC elbow cast in end of cover to create an inlet through the cover when the tank is used as a holing tank.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 1620** — When this product has a built-in bedpan washer that has a shut off valve on the discharge, a vacuum breaker meeting ASSE Standard 1056 must be installed in the water supply serving only the bedpan washer. The vacuum breaker must be installed with its critical level at least 12" above the highest point downstream where backpressure would be created.
- 1621** — When this product has a built-in bedpan washer that does not have a shut off valve on the discharge, a vacuum breaker meeting ASSE Standard 1001 must be installed in the water supply serving only the bedpan washer. The vacuum breaker must be installed with its critical level at least 6" above the highest point downstream where backpressure would be created.
- 1622** — When this product is installed with geotextile fabric on the sides of this product in a distribution cell that is sized based on the EISA rating stated in the regarding block of the product approval letter, the EISA rating with fabric must be used to size the system.
- 1623** — The maximum daily wastewater flow that may discharge through this product is 375 gallons per day.
- 1624** — The maximum daily wastewater flow that may discharge through this product is 525 gallons per day.
- 1625** — The maximum vertical distance for any riser is 12 inches.
- 1626** — The sizing calculations of the pressure distribution network must include head loss for this product based on flow rate, model and manufacturer pressure loss chart..
- 1627** — This product may be installed using the following inlet/out combinations that provide at least 85 inches between baffles.
- 1628** — The inlet and outlet baffles must be located directly below their respective manhole opening.
- 1629** — This product may be installed using the following inlet/out combinations that provide at least 104 inches between baffles.
- 1630** — This product may be installed using the following inlet/out combinations that provide at least 114 inches between baffles.
- 1631** — This product may be installed using the following inlet/out combinations that provide at least 92 inches between baffles.

## APPROVAL STIPULATIONS

- 1632** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - PolyLok tank riser model 3008 and 3008-RC.
  - PolyLok 5, clampable boot seal for pipe openings.
- 1633** — This product is approved to use the following:
- Four, six or eight inch inlet and outlet openings.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four inch discharge opening in riser.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Metal lockdown cover.
  - Cast-A-Seal and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 1634** — This product must be installed with the Pressure-monitoring, heat exchanger tube wall leak detection feature and equipment when toxic chemicals are in the heat transfer liquid.
- 1635** — The fittings must be labeled with the manufacturer's name or trade mark, size and tubing material for which the fitting is intended to connect together.
- 1636** — This product may be used to join together copper that complies with ASTM B88, CPVC that complies with ASTM D2846 or CSA B137.6 and PEX that complies with ASTM F876 or F877.
- 1637** — When this tank is installed with the optional partition wall, the wall must be installed by the manufacturer and installed in the rib that is located approximately 2/3 of the tank length when measured from the inlet end of the tank.
- 1638** — This product is approved to use the following:
- Department approved plastic risers and covers installed as required by product approval for the plastic risers and covers with the first riser cast into cover at time of tank production.
  - Conduit hole cast in riser for electrical wiring.
  - Polylok IV High Pressure Pipe Boot Seal by Polylok.
  - Four inch cast iron or schedule 40 ABS or PVC elbow cast in end of cover to create an inlet through the cover when the tank is used as a holding tank.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - A 4" diameter hole located at any distance below the normal hole through the outlet end wall.

## APPROVAL STIPULATIONS

- 1639** — This must:
1. Not be installed in water saturated clay or in high water table,
  2. Not be installed under areas where there is motorized traffic,
  3. Not be used as a holding or pump tank,
  4. Be filled with water even with the backfill level when being backfilled, and
  5. Be immediately refilled with water after pumping.
- 1641** — This product is approved to use the following:
- Side opening for when product is used as a holding tank.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Four inch discharge opening in riser.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" and PSX Gasket System by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc..
  - Dual inlets at end of tank with one access opening above both inlets.
  - Dual inlets at end of tank with one access opening above each inlet.
  - Manhole riser and cover having a rectangular, round, or square shape with a minimum 24" inside dimension.
  - A slide-in dividing wall (Super Screen) in the septic tank or in the first septic compartment of a two compartment tank. The dividing wall has an 8" diameter hole that has its center located 12" above the bottom and is centered in the width of the dividing wall. The top of the dividing wall extends at least 4" above the liquid level and terminates at least 2" below the bottom of the tank cover. The location of the dividing wall in a single compartment tank is between 1/2 to 3/4 of the inside length of the tank when measured from the tank inlet. The location of the dividing wall is between 1/4 to 1/2 of the inside length of the first compartment of a two-compartment tank in relationship to the length of the compartment when measured from the tank inlet.
- 1642** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Four or six-inch inlet and outlet openings.
  - Cast-A-Seal and PSX Gasket System by Press Seal Gasket Corp. and Polylok II High Pressure Pipe Seal by Polylok.
  - 1-1/2 inch schedule 40 PVC cast in riser for electrical wiring.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Department approved effluent filter designed installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Cast in EZ Set Riser, 24" Dia., Height 6", 12" and 18".
  - Cast in Rubber Boot.
  - Plastic Baffle Plate with (SS) Nylon nail-in fasteners.
- 1643** — Approved under this approval for the sizes indicated above are any molded parts with a product number ending in WT.
- 1644** — Combinations of the above listed fittings may be incorporated into one fitting. (i.e. triple manifold tee with manifold cleanout and extra welded inlet)

## APPROVAL STIPULATIONS

- 1645** — The product is marked as follows:  
 SYNFLEX 4209-XXXX PE TUBING NSF-51 MAX TEMP 150F SAINT-GOBIN;  
 SYNFLEX 4220-XXXX PA BARRIER TUBING NSF-51 MAX TEMP 150F SAINT-GOBIN;  
 SYNFLEX TASTE-RITE 4227-XXXX PET BARRIER TUBE NSF-51 MAX TEMP 150F  
 NSF-61 SK394-001 SAINT-GOBIN (LOT #);  
 SYNFLEX 3223-XX PA REDLINE PLUS BARRIER HOSE NSF-51 MAX TEMP 150F  
 SAINT-GOBIN;  
 SYNFLEX 3224-XX PA REDLINE PLUS BARRIER HOSE NSF-51 MAX TEMP 150F  
 SAINT-GOBIN;  
 SYNFLEX TASTE-RITE 3227-XX PET BARRIER HOSE NSF-51 MAX TEMP 150F NSF-  
 61 SK394-001 SAINT-GOBIN (LOT #); or  
 SYNFLEX TASTE-RITE 3228-XX PET BARRIER HOSE NSF-51 MAX TEMP 150F NSF-  
 61 SK394-001 SAINT-GOBIN (LOT #)
- XXXX after the model number designates the tube or hose size.
- 1646** — This product is approved to use the following:
- Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Cast-A-Seal by Press Seal Gasket Corp., Polylok II High Pressure Pipe Seal by Polylok, and A-Lok X-Cel by A-Lok Products, Inc.
  - Dual inlets with one access opening above both inlets.
  - Dual inlets with one access opening above each inlet.
  - Inlet(s) and outlet(s) on opposite sides of tank, inlet(s) on end or side of tank with outlet on end of tank or interior wall.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - E-Z Set Lids and Risers installed in accordance with the E-Z Set Tank Company, Inc product approval issued by this department or cast into the concrete cover.
- 1647** — The gallons per inch for this product are:
- | Gallons per inch | Liquid Level in inches |
|------------------|------------------------|
| 23.3             | 0 to 33                |
| 23.0             | 33 to 34               |
| 22.0             | 34 to 35               |
| 22.0             | 35 to 36               |
| 22.0             | 36 to 37               |
| 21.0             | 37 to 38               |
| 21.0             | 38 to 39               |
| 21.0             | 39 to 40               |
| 20.0             | 40 to 41               |
| 20.0             | 41 to 42               |
| 19.0             | 42 to 43               |
| 19.0             | 43 to 44               |
- 1648** — This product is labeled with a sticker that contains the following information: 1000 GALLON, 1000-2BSR along with other information.
- 1649** — The fittings are marked by an indelible paint pen with the following wording on top centerline of the fitting, normally near the center of the fitting. The product number, customer order number, and the contractor name or job site name.

## APPROVAL STIPULATIONS

- 1651** — This product may not be located in any of the following areas.
- An enclosed stairwell,
  - an area subject to positive pressure conditions for more than 12 continuous hours,
  - an area utilized as supply or return air plenum,
  - a pit, vault or depression which is below the adjacent grade or floor level, or
  - where exposed to outdoor elements.
- 1652** — This product must be located:
- a minimum of 4 inches above the top of the horizontal pipe being served (see note a),
  - no more than 20 inches below the flood rim of any fixture served by this product (see note a),
  - at least 6 inches above insulation materials (see note a),
  - in an accessible area that will allow the product to be maintained and/or replaced,
  - within a ventilated space that allows air to enter the product and has an opening with an area of at least one-inch to the building air or outside air, and
  - in accordance with s. Comm 82.31 (9), Wis. Adm. Code.
- Note a: The distance is measured from termination of the vent pipe to the point noted in the stipulation.
- 1655** — When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L, fecal coliform of less than or equal to 10,000 cfu/100ml when installed with UV disinfection system, and Total Nitrogen of less than or equal to 15 TKN when installed with the denitrification system.
- 1656** — The maximum daily estimated wastewater flow, which may discharge through this product, is 600 gallons per day.
- 1657** — Bury depth for the processor tank (that which houses this product) must not exceed 2 feet.
- 1658** — This product must have a septic tank that is designed to handle the design gallon per day flow upstream of this product.
- 1659** — This product must not receive discharge from water treatment devices that require back flushing.
- 1660** — Use of toilet tablets or drain cleaners such as Drain-O or septic tank additives are prohibited from use with this product.
- 1661** — When a single compartment septic tank is installed upstream of the product, a minimum 300 gallon tank with effluent filter must be installed between the septic tank and processor tank.
- 1662** — This product must contain a combination of biopack media and polystyrene beads treatment media when the influent is equal to or greater than 300 mg/L of BOD5.
- 1663** — Copy of the Owner Care and Maintenance information must be given to the owner and occupant.
- 1664** — This product may be installed with its optional UV disinfection system and/or denitrification system.
- 1665** — This product must be maintained six months after the installation and every 12 months thereafter.
- 1666** — The UV light and sleeve must be replaced every year and the light must be powered on at all times except when replacing the UV lights.

## APPROVAL STIPULATIONS

- 1667** — The gallon capacity per inch of the Containment Solutions, Inc., (10') D6-SWT 25000 gallon tank is shown below as height from tank bottom / gallons capacity. (i.e. 11/1103 = 11 inch liquid level equals 1103 gallons in tank)
- 4/256, 5/351, 6/456, 7/570, 8/692, 9/822, 10/959, 11/1103, 12/1253, 13/1410, 14/1572, 15/1740, 16/1914, 17/2093, 18/2276, 19/2464, 20/2657, 21/2885, 22/3056, 23/3261, 24/3471, 25/3684, 26/3900, 27/4120, 28/4344, 29/4570, 30/4800, 31/5033, 32/5268, 33/5506, 34/5747, 35/5990, 36/6235, 37/6483, 38/6733, 39/6984, 40/7238, 41/7494, 42/7751, 43/8010, 44/8271, 45/8532, 46/8796, 47/9060, 48/9326, 49/9593, 50/9860, 51/10129, 52/10398, 53/10668, 54/10939, 55/11210, 56/11482, 57/11753, 58/12026, 59/12298, 60/12570, 61/12843, 62/13115, 63/13387, 64/13658, 65/13930, 66/14201, 67/14471, 68/14740, 69/15009, 70/15277, 71/15544, 72/15810, 73/16075, 74/16339, 75/16602, 76/16863, 77/17122, 78/17380, 79/17636, 80/17891, 81/18143, 82/18394, 83/18643, 84/18889, 85/19133, 86/19674, 87/19613, 88/19850, 89/20083, 90/20314, 91/20542, 92/20766, 93/20988, 94/21206, 95/21420, 96/21631, 97/21838, 98/22041, 99/22239, 100/22434, 101/22624, 102/22809, 103/22990, 104/23165, 105/23336, 106/23500, 107/23659, 108/23812, 109/23958, 110/24098, 111/24231, 112/24356, 113/24473, 114/24581, 115/24680, 116/24769, 117/24845, 118/24909 and 119/24954.
- 1668** — When this tank is used a septic tank effluent pump system, the capacity and float levels must comply with the follow requirements:
1. A treatment zone equal to at least 2.088 times the design wastewater flow entering the tank,
  2. A drawdown zone based on the system design, and
  3. A one-day reserve zone above the high water alarm level based on the estimated wastewater flow.
- 1669** — This product is approved to use the following:
- Variable sealable opening through tank risers for electrical or pump discharge connections.
  - Department approved effluent filters installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Lower end pipe openings for septic, siphon, pump, holding or STEPS tank installations.
  - Department approved risers installed in accordance with the product approval for the riser.
  - 24", 30" or 48" diameter PVC riser with cover attached using an acceptable locking device.
- 1670** — When this tank is used a septic tank, the gallon per day design treatment capacity based on a 3 year service interval for residential wastewater equals the tank capacity divided by 2.088.

## APPROVAL STIPULATIONS

- 1671** — The gallon capacity per inch of the Containment Solutions, Inc., (8') G-6 SWT 7000 gallon tank is shown below as height from tank bottom / gallons capacity. (i.e. 11/440 = 11 inch liquid level equals 440 gallons in tank)
- 4/103, 5/141, 6/183, 7/228, 8/277, 9/328, 10/383, 11/440, 12/499, 13/561, 14/626, 15/692, 16/761, 17/832, 18/905, 19/979, 20/1056, 21/1134, 22/1213, 23/1294, 24/1377, 25/1461, 26/1546, 27/1633, 28/1720, 29/1809, 30/1899, 31/1989, 32/2081, 33/2173, 34/2267, 35/2361, 36/2455, 37/2550, 38/2646, 39/2742, 40/2838, 41/2935, 42/3032, 43/3130, 44/3227, 45/3325, 46/3422, 47/3520, 48/3617, 49/3715, 50/3812, 51/3909, 52/4005, 53/4102, 54/4197, 55/4293, 56/4387, 57/4482, 58/4575, 59/4668, 60/4760, 61/4851, 62/4941, 63/5030, 64/5118, 65/5205, 66/5290, 67/5375, 68/5458, 69/5540, 70/5620, 71/5699, 72/5776, 73/5851, 74/5924, 75/5996, 76/6065, 77/6133, 78/6198, 79/6261, 80/6322, 81/6380, 82/6435, 83/6488, 84/6537, 85/6584, 86/6627, 87/6666, 88/6702, 89/6733, 90/6758 and 91/6777.
- 1672** — The gallon capacity per inch of the Containment Solutions, Inc., (6') D6-SWT 3000 gallon tank is shown below as height from tank bottom / gallons capacity. (i.e. 11/297 = 11 inch liquid level equals 297 gallons in tank)
- 4/66, 5/92, 6/121, 7/152, 8/185, 9/220, 10/258, 11/297, 12/337, 13/379, 14/423, 15/468, 16/514, 17/561, 18/609, 19/659, 20/703, 21/760, 22/812, 23/865, 24/918, 25/972, 26/1027, 27/1082, 28/1138, 29/1194, 30/1250, 31/1307, 32/1364, 33/1421, 34/1478, 35/1536, 36/1593, 37/1651, 38/1708, 39/1766, 40/1823, 41/1880, 42/1937, 43/1993, 44/2049, 45/2105, 46/2160, 47/2215, 48/2269, 49/2322, 50/2375, 51/2427, 52/2478, 53/2528, 54/2578, 55/2626, 56/2673, 57/2719, 58/2764, 59/2807, 60/2850, 61/2890, 62/2929, 63/2966, 64/3002, 65/3031 and 66/3066.
- 1673** — When wastewater from this tank is discharge to a POWTS treatment or dispersal component that consist in part of unsaturated soil, provisions must be made to remove any solid or suspended solid exceeding 1/8-inch in diameter before the wastewater is discharged the soil component.
- 1674** — The pirana Sludgehammer model P-46 must be installed in a tank or tanks that comply with the following:
1. Tank volume of the compartment or tank which will house the treatment device must be at least 300 and no greater than 1000 gallons.
  2. Liquid level of the compartment or tank which will house the treatment device must be at least 38 inches and no greater than 72 inches.
  3. Distance that the treatment device must be horizontally away from the tank inlet or the outlet of the first or second compartment or tank must be at least 6 inches and no greater than 36 inches.
  4. The volume of the compartment or tank that does not house the treatment device must be at least 200 gallons and no greater than 1000 gallons.
  5. Liquid level of the compartment or tank that does not house the treatment device must be at least 38 inches and not greater than 72 inches.
  6. In tanks containing greater than two compartments, the above sizing requirements will refer only to the first and second compartments of such tanks.

## APPROVAL STIPULATIONS

- 1676** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Two inch PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" gaskets.
  - Dual inlets at end of tank with an access opening above one inlet and an observation opening over the other inlet.
  - Bottom pipe openings for pump and holding tanks.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Department approved riser and cover assembly installed in accordance with the product approval for the riser and cover assembly.
- 1677** — This product may be installed for the following drain or vent use(s):
- a. Sanitary drain and vent piping . . gravity flow, above ground or underground
  - b. Sanitary sewer . . . . . gravity flow
  - c. Storm drain and vent piping . . . gravity flow, above ground or underground
  - d. Storm sewer . . . . . gravity flow
- 1678** — This product must be installed and joints made in accordance with the manufacturer's published instructions (i.e. ChemDrain TECHNICAL AND INSTALLATION MANUAL, TM-CD, July 2005).
- 1679** — The pipe for this product must be labeled on one side with black lettering on yellow stripe with: "CHARLOTTE PIPE TrueFit System (pipe series, i.e. 14002C) (pipe size, i.e. 2") ChemDrain CORZAN CPVC 4120 SCH 40 NSF-cw-SE MADE IN USA; while the fittings must be labeled with Charlotte NSF-cw SE CPVC cw (part # i.e. Aw 324C) Made in USA (size i.e. 2").
- 1680** — The maximum daily wastewater flow which me discharge through this product is 800 gallons per day.
- 1681** — The maximum daily wastewater flow which me discharge through this product is 1200 gallons per day.
- 1682** — The maximum daily wastewater flow which me discharge through this product is 1750 gallons per day.
- 1683** — The maximum daily wastewater flow which me discharge through this product is 2250 gallons per day.
- 1684** — This product must be installed in sewage treatment or holding tanks which were approved at the time of existing installation and/or are currently approved for new/replacement installations by this department and meets the sizing requirements for this product use.
- 1686** — The gallon capacity per inch of the Xerxes Corp., 600 gallon tank is shown below as height from tank bottom / gallons capacity. (i.e. 11/103 = 11 inch liquid level equals 103 gallons in tank)
- 4/24, 5/33, 6/43, 7/54, 8/65, 9/77, 10/90, 11/103, 12/117, 13/131, 14/145, 15/160, 16/175, 17/191, 18/207, 19/223, 20/239, 21/255, 22/271, 23/287, 24/304, 25/320, 26/337, 27/353, 28/369, 29/385, 30/401, 31/417, 32/432, 33/447, 34/462, 35/476, 36/490, 37/504, 38/517, 39/529, 40/541, 41/552, 42/563, 43/572, 44/581, 45/588, 46/595 and 47/600.
- 1687** — Model 3014-525 will prevent solids with a size greater than 1/16" in size from passing and model 3014-625 will prevent solids with a size greater than 1/32" in size from passing.

## APPROVAL STIPULATIONS

- 1688** — Approval is issued for this product because the design of the product meets the intent of s. Comm 84.41 (3), Wis. Adm. Code that requires adequate protection of the potable water supply. The Watts N9 installed to serve the handheld shower is considered to provide adequate protection of the potable water serving this product.
- 1690** — The gallon capacity per inch of the Containment Solutions, Inc., (8') G-6 SWT 7000 gallon tank is shown below as height from tank bottom / gallons capacity. (i.e. 11/511 = 11 inch liquid level equals 511 gallons in tank)
- 4/120, 5/165, 6/213, 7/266, 8/322, 9/382, 10/445, 11/511, 12/580, 13/652, 14/726, 15/803, 16/883, 17/964, 18/1048, 19/1134, 20/1222, 21/1312, 22/1403, 23/1496, 24/1591, 25/1688, 26/1785, 27/1885, 28/1985, 29/2087, 30/2190, 31/2294, 32/2399, 33/2504, 34/2611, 35/2719, 36/2827, 37/2936, 38/3045, 39/3155, 40/3265, 41/3376, 42/3487, 43/3598, 44/3710, 45/3821, 46/3933, 47/4045, 48/4156, 49/4267, 50/4379, 51/4490, 52/4600, 53/4710, 54/4820, 55/4929, 56/5037, 57/5145, 58/5252, 59/5358, 60/5463, 61/5568, 62/5671, 63/5773, 64/5874, 65/5974, 66/6072, 67/6169, 68/6265, 69/6358, 70/6451, 71/6541, 72/6630, 73/6716, 74/6801, 75/6883, 76/6964, 77/7041, 78/7117, 79/7190, 80/7260, 81/7327, 82/7391, 83/7452, 84/7510, 85/7564, 86/7614, 87/7660, 88/7701, 89/7737, 90/7767 and 91/7789.
- 1691** — This product may only be used as a POWTS holding component in campgrounds permitted by the Department of Health and Family Services under ch. HFS 178.
- 1692** — The solvent cement joints in the Over Flow Alarm Site Indicator must be made with an One Step cement in accordance with the cement manufacturer's instructions or s. Comm 84.40 (14) of the Wisconsin Administrative Code, which states which requires joint surfaces to be cleaned, a primer conforming to ASTM F656 applied to all joint surfaces, and solvent cement conforming to ASTM D2564 applied to all joint surfaces and the joint made while the cement is wet.
- 1693** — This product is approved to use the following:
- Single or Dual inlet(s) and/or outlet(s) at end of tank with either one access opening above both inlets or outlets or individual access openings over each inlet and/or outlet.
  - Bottom openings for pump and holding tanks.
  - Four inch discharge opening in riser.
  - Department approved effluent filter designed to be installed in a four inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Two inch schedule 40 PVC cast in riser for electrical wiring.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp., or Fernco gasket model 44 V-405.
  - Four or six inch PVC coupling cast in the tank or cover wall for connection of inlet, outlet, observation or vent pipe.
  - TUF-TITE Round Riser System to be installed in accordance with the product approval issued to TUF-TITE.

## APPROVAL STIPULATIONS

- 1694** — The products produced by this manufacturer are approved to use the following:
- Bolt on anodes.
  - One inch opening for electrical connections.
  - Internal support rings spaced evenly along tank.
  - Optional 6", 8", or 10" threaded plug in access cover.
  - Flip top access cover or bolt down cover with or without gasket.
  - 3", 4" or 6" diameter suction pump extension with coupling located at either end or in top of tank.
  - 2" opening for vent connection.
  - 4", 6" or 8" inlet and/or outlet.
- 1695** — This tank may have a Bio-Microbics FAST 3.0 or 4.5 installed in accordance with the Wisconsin Plumbing Product approval for the FAST unit being installed.
- 1696** — When this product is installed with a BIO-MICROBICS FAST 3.0 or 4.5 treatment systems in accordance with the manufacturer's recommendations and per the product approval, which receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS and F.O.G. of less than 30 mg/L and fecal coliform of less than or equal to 10,000 cfu/100ml.
- 1698** — This product has BEST TECHNOLOGY embossed on the top of the filter plate.
- 1699** — The discharge from this product must discharge to the sanitary drain system through air-gap or air break into a trapped and vented receptor.
- 1700** — This product has an acceptable built-in air-gap in the water supply to provide protection of the potable water supply.
- 1701** — When an air admittance valve is installed to serve a standpipe receiving the discharge from a pumped-discharge type clothes washer, installation must comply with the following conditions:
- The standpipe and trap is at least 2" inch in diameter,
  - The fixture drain between the trap and point of vent is at least 2" in diameter, and
  - The fixture drain downstream of the point of vent is at least 3" in diameter.
- 1702** — This product must be located and the system sized in accordance with Table 1.

Ayrlett Air Vent Models A-55 and P-50 with or without adapters

Maximum Drainage Fixture Units Served (see note a)		Table 1 Maximum Developed Distance of Vent to Connection of Air Admittance Valve in feet		
		Diameter of vent in inches		
		1-1/4 (see note b)	1-1/2 (see note c)	2
1		35	NL (see note d)	NL
3		28	140	NL
6		NP (see note e)	100	200
20		NP	60	110

Notes: a: Drainage Fixture Units based on ch. Comm 82, Wis. Adm. Code

b: No water closets permitted

c: Not more than two (2) water closets or similar type fixtures of four (4) or more drainage fixture units.

d: NL means no limit

e: NP means not permitted

## APPROVAL STIPULATIONS

- 1703** — A septic tank have a volume of at least 500 gallons and not more than 1000 gallons must be installed upstream of this product.
- 1704** — This product's tank top must be buried between 12 inches and 48 inches below finished grade.
- 1705** — When this product receives wastewater from dwellings, it will produce an effluent quality with a maximum monthly average value for BOD5 of less than or equal to 30 mg/L, TSS of less than or equal to 30 mg/L TSS, F.O.G. of less than 30 mg/L and solids or suspended solids of less than or equal to 1/8 inch in diameter.
- 1706** — The products produced by this manufacturer are approved to use the following:
- One-inch schedule 40 PVC cast in riser for electrical wiring.
  - Bottom openings for holding tank and for pump tank or compartment.
  - Department approved effluent filter designed installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Access opening cover with 4-inch opening.
  - Press Seal "Cast-A-Seal" by Press Seal Gasket Corp.
  - Department approved plastic risers and covers.
- 1741** — The pipe must be labeled with "WIRSBO-CLEANPEX, 25 x 3.5 (size, O.D. x wall thickness), 95 C, PN10, SB05020128 (lot numbers may vary).
- 1742** — The fittings used with this piping must be Wirsbo "Quick and Easy" barbed or "Swagelock", both of which are compression fittings comprised of 316 stainless steel. The fittings must display the manufacturers mark.
- 1743** — The maximum operating pressure for these pipes and fittings is 145 psig.
- 1744** — An acceptable means of hand washing must be provided at each installation site.
- If water is provided to aid in hand washing, then the water must be supplied from a NR 811 and/or NR 812 approved source.

## APPROVAL STIPULATIONS

- 1745** — A plumbing plan must be submitted and approved prior to each proposed installation in accordance with Comm 82.20 (1) (a) 2. A Plumbing Plan Review must be successfully completed prior to each proposed installation. A minimum of four sets of completed plans and specifications, signed by a Wisconsin registered Architect, Designer, Engineer or licensed Master Plumber shall be submitted along with the following specific information:
- a. A "Plumbing Plan Review Application" (i.e. SBD-6154) and required fee;
  - b. A scaled plot plan;
  - c. A scaled floor plan;
  - d. A drain, waste and vent system (i.e. DWV) isometric drawing for the engineered blackwater/graywater system;
  - e. A non-potable water system isometric drawing;
  - f. A potable water system isometric drawing;
  - g. A maintenance manual addressing all serviceable components or systems;
  - h. A written contingency plan; and
  - i. Water calculation worksheets:
    1. The complete non-potable water system; and
    2. The complete potable water system
  - j. A copy of this approval letter

For system installations that include irrigation and/or infiltration, the following information must also be provided:

- k. The soil type; and
- l. Infiltration rate

After the plan review process is complete, and the installation is finished, the State Plumbing Consultant assigned to the county in which the installation is located, shall inspect the completed installation. The final installation shall be completed and passed before the system is put into service.

Some of the information listed previously may not pertain to a specific installation.

- 1746** — A copy of a deed attachment, and a copy of the cancelled check made out to the Register of Deeds in the county the proposed installation will be located, must be sent along with each Plumbing Plan. The deed attachment must contain the following minimum information:

1. A written functional description of the system and it's anticipated effects;
2. A written statement by the owner that specifically acknowledges that if the maintenance of the system is not performed on schedule, or quarterly reports are not received in time, the system will be ordered shut down and removed.

Plumbing Plans submitted without a deed attachment will not be reviewed.

- 1747** — Monitoring of these systems shall be performed by licensed POWTS Maintainers, Master Plumbers or licensed professional Engineers. The maintenance of these systems may be performed by an unlicensed individual.

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- 1748** — Data collection and reporting shall occur on a monthly basis. The minimum data collected and reported shall consist of the following for each system:
- a. The scum, sludge and water volumes in all holding, storage and treatment tanks within the system;
  - b. The volume of any make-up water added to, or wastewater subtracted from the system;
  - c. Any maintenance performed on the system, including regularly scheduled maintenance;
  - d. The following data shall be collected grab samples of water withdrawn directly from the water storage chamber within the system's third stage treatment tank:
    1. pH;
    2. Biological oxygen demand - 5 day (BOD5);
    3. Total suspended solids (TSS);
    4. Fecal coliform per 100 ml;
    5. Color; and
    6. Odor
    7. Free chlorine residual

All chemical/physical analyses must be performed in accordance with "Standard Methods For the Examination of Water and Wastewater", current edition.

This data must be officially reported to this department by a Wisconsin registered Architect, Engineer or licensed Master Plumber who's directly overseeing the installation and maintenance. The data must be collected and submitted on a monthly basis, the filing fee for the monthly reports is \$25.00. Data submitted without the \$25.00 fee does not constitute a valid submittal and shall be returned. If the data requested for a given system is more than thirty days late, then the system will be shut down and ordered removed and the pertinent experimental system approval immediately rendered null and void.

- 1749** — Any initial start-up water, or make-up water, added to these systems must be supplied from a NR 811 or NR 812 approved source.
- 1750** — Any wastewater or waste materials (e.g. sludge, scum) withdrawn from these systems must be disposed of in accordance with NR 113.
- 1751** — This experimental system approval is limited to a total of twenty-five sales and/or installations statewide.
- 1752** — The influent wastewater to these systems is limited to human toilet/urinal and graywater wastes only.

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- 1753** — The final effluent from these systems may only be used for the following specific end uses:
- Surface irrigation of landscaping (1, 2);
  - Vehicle washing (1);
  - Toilet and urinal flushing;
  - Air conditioning;
  - Once through cooling;
  - Subsurface dispersal/irrigation;
  - Soil compaction/dust control (1); and
  - Washing aggregate/making concrete (1);
- Other urban uses with similar human access or exposure must be approved by this department, in writing, prior to these devices being sold or installed for any other purposes other than those listed in a-h above. Any, or all, of the aforementioned end uses may require a Wisconsin Pollutant Discharge Elimination System (WPDES) permit, contact the Wisconsin Department of Natural Resources WPDES permit program at (608) 267-7639 to determine what, if any, permitting may be required.
- 1 = in addition to acceptable disinfection with free chlorine, or equivalent alternative, systems installed for this end use application must also provide an acceptable means of cyst/oocyst reduction.
- 2 = does not include food crops
- 1754** — Bio-Guard, sodium hypochlorite, 3-inch diameter, non-expandable tabs, EPA Product Number 5185-144, EPA Establishment Number 585-GA-1, must be installed in the chemical tube, downstream of the activated carbon filter, within the third stage treatment tank, at all times.
- The free chlorine concentration within the water storage chamber must be greater than, or equal to, 1.0 mg/l at all times.
- 1755** — In addition to department approved plans, if the final effluent from these systems is discharged below the surface of a soil, then at least one of the following must be true:
- There must be a minimum of one foot of separation between the point of infiltration and groundwater; or
  - The wastewater must contain 0 fecal coliform per 100 ml.
- 1756** — This experimental approval in its entirety, or any of the twenty-five installation sites permitted under this experimental approval, can be terminated from further consideration at any time.
- 1757** — These tanks must be designed to withstand the pressures to which they will be subjected.
- 1758** — Installation and servicing of these systems must be performed in accordance with the manufacturer's written instructions and this approval letter. A copy of the manufacturer's installation and servicing instructions, and a copy of this approval letter, must be given to the owner of each system.

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- 1759** — The manhole (entry) openings for these systems shall be a minimum of 23 inches in the least dimension. The inspection ports for these systems shall be a minimum of three inches in the least dimension.
- Inspection ports and manhole openings for systems, located below ground, shall extend to a minimum of the finished grade. Inspection, servicing and maintenance openings for these systems shall terminate with a means that prevents entrance of deleterious materials.
- Covers for these systems located at, or above, grade for openings larger than eight inches in the greatest dimension shall be provided with locking devices. These locking devices shall remain locked except for inspection, servicing or maintenance purposes.
- 1760** — The maximum depth of bury for these systems is four feet.
- 1761** — The backfill material for these systems shall be stone free.
- 1764** — This product is approved to use the following:
- Press Seal "Cast-A-Seal" gaskets
  - Dual or triple inlets at end of tank with one access or multiple openings above each inlet.
  - Dual or triple outlets end of tank with one access or multiple openings above each outlet.
  - Department approved effluent filter installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
  - Tuf-Tite manhole risers and covers.
  - Bottom and side pipe openings for siphon, pump and holding tanks.
  - Six inch inlet and outlet openings.
  - "E-Z Set" access risers RIS-2012, RIS-2406 & RIS-2412.
- 1765** — A permanent tag or label must be affixed to these experimental systems in a location that is visible after installation is complete. The tag or label must display the following minimum information:
1. The complete name and mailing address of the manufacturer (i.e. Environmental Plumbing Solutions, Inc.);
  2. The telephone number of the manufacturer (i.e. Environmental Plumbing Solutions, Inc.);
  3. The model number of the experimental system
- 1767** — -This tank may only be used in conjunction with the Bio-Microbics Inc., Fast 0.5, 0.75 or 0.9 or High Strength Fast 1.0 units.
- 1768** — These devices have undergone sufficient testing to document the devices abilities to properly inject ozone into a water supply system. However, these devices are not approved for the reduction of any specific contaminant, aesthetic or otherwise. This is because no acceptable data has been submitted to support a specific contaminant reduction performance claim.
- 1769** — This filtration system and the associated cartridges may only be installed and used with Sears Kenmore Side by Side Refrigerators with a Push Button In-Grille Filter. The filtration system and the associated cartridges are not approved for use in any other type of Sears Kenmore refrigerator or refrigerators manufactured by companies other than Sears.
- 1770** — This device must be installed along with a performance indication device (PID). The PID installed must be the same model of PID that was evaluated under NSF International Test Report # 513329-03.

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- 1771** — An acceptable means of handwashing must be provided.
- If water is provided to aid in hand washing, then the water must be supplied from a NR 811 and/or NR 812 approved source.
- 1772** — A deed attachment must be filed with the Registrar of Deeds in Clark County. The deed attachment shall contain the following minimum information:
- a. A written, functional description of the system and it's and it's anticipated effects; and
  - b. A written statement, by the owner, that specifically acknowledges that is the maintenance of this system is not performed on schedule, or quarterly reports are not received in time, then this system will be ordered shut down and removed.
- The start-up of this system may not proceed until the deed attachment has been filed.
- 1773** — Monitoring of this system shall be performed by Wisconsin licensed POWTS Maintainers, Wisconsin licensed Master Plumbers or Wisconsin licensed professional Engineers.
- The maintenance of this system may be performed by an unlicensed individual.

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- 1774** — Data collection and reporting shall occur on a quarterly basis when the system is in operation. The minimum data collected and reported shall consist of the following:
1. The scum, sludge and water volumes in all holding, storage and treatment tanks within this system;
  2. The volume of any make-up water added to, or wastewater subtracted from this system;
  3. Any maintenance performed on this system, including regularly scheduled maintenance
  4. The following data shall be collected downstream of the Wedeco M2 ultra violet disinfection unit, and prior to any distal outlets:
    - a. pH;
    - b. Biological oxygen demand (BOD5)
    - c. Total suspended solids (TSS)
    - d. Fecal coliform per 100 ml;
    - e. Color; and
    - f. Odor.

The following data shall be collected after the carbon filter and prior to the WEDECO M2 ultra violet disinfection unit:

1. Color (15 APHA units max.);
2. Dissolved iron (0.3 mg/l max.);
3. Dissolved manganese (0.05 mg/l max.);
4. Hardness (120 mg/l max.);
5. Hydrogen sulfide (no detectable odor max.);
6. Iron bacteria (none present max.);
7. pH (6.5 min. - 9.5 max.)
8. Total suspended solids (5.0 mg/l max.)
9. Turbidity (5.0 NTU max.)
10. Total coliform (1,000 CFU/100ml max.)
11. E. Coli (100 CFU/100 ml max.)
12. UVt (75% min.)

All chemical and physical analyses must be performed in accordance with "Standard Methods For The Examination Of Water And Wastewater", current edition. Color and odor determinations may be reported as present or absent, along with a description of the color

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and/or odor if present. Ultra violet transmittance (UVt) may be determined on-site with a calibrated meter.

Additional UV pretreatment, or an acceptable alteration of the disinfection process will be required if any of the maximum/minimum criteria displayed immediately above are not met.

All data requested above must be officially reported to this department by a Wisconsin registered Architect, Wisconsin registered Engineer or Wisconsin licensed Master Plumber that's directly overseeing the installation and maintenance. The data must be collected on a quarterly basis while the system is in full operation. The filing fee for the quarterly reports is \$25.00. Data submitted without the \$25.00 fee does not constitute a valid submittal and shall be returned. If the data requested for this system is more than thirty days late, then the system will be shut down and ordered removed and this approval immediately rendered null and void.

The data we are requesting in this approval letter may be subtracted from, or added to, as deemed appropriate by this department.

- 1775** — Any initial start-up water, or make-up water, added to system must be supplied from a NR 811 and/or NR 812 approved source.
- 1776** — Any wastewater and/or waste materials (e.g. sludge, scum) withdrawn from this system must be disposed of in accordance with NR 113.
- 1777** — This experimental system approval is limited to a single installation located at NW, NE, Sec. 18, T24N, R2W, Town of Pine Valley, Clark County, Wisconsin.
- 1778** — The influent wastewater to this system is limited to human toilet/urinal and graywater wastes only.
- 1779** — The final effluent from this system may only be used for the following specific end uses:
  - a. Toilet and urinal flushing;
  - b. Subsurface dispersal/irrigation

Other uses with similar human access or exposure must be approved by this department, in writing, prior to this system being used for any other purposes than those listed in a-b above. Any, or all, of the aforementioned end uses may require a Wisconsin Pollution Discharge Elimination System (WPDES) permit. Contact the Wisconsin Department of Natural Resources WPDES program at (608) 267-7639 to verify what, if any, permitting is required.

- 1780** — A WEDECO model M2 ultra violet (UV) disinfection unit that conforms to NSF/ANSI Standard 55 - 2002, Class A, criteria must be installed and maintained downstream of the carbon unit and prior to any distal outlets. The minimum UV dosage shall be maintained at, or above, 40 millijoules (mJ) per square centimeter (cm<sup>2</sup>). All required pre-treatment equipment must be installed and maintained at all times while this system is in operation such that the performance of the WEDECO M2 UV disinfection unit is not compromised.
- 1781** — If the final effluent from this system is used for subsurface dispersal/irrigation then the maximum soil application rate shall conform with Table Comm 83.44-2 and the minimum depth of unsaturated soil shall conform to Table Comm 83.44-3.
- 1782** — This experimental approval can be terminated from further consideration at any time.
- 1783** — Installation and servicing of this system must be performed in accordance with the component manufacturers written instructions and this approval letter. Copies of the component manufacturers installation and servicing instructions, and a copy of this approval letter must be given to the owner of this system.

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- 1784** — The manhole (entry) openings for all treatment tanks used in this system shall be a minimum of twenty-three inches in the least dimension. The inspection ports for this system shall be a minimum of three inches in the least dimension.
- Inspection ports and manhole openings for all treatment components, located below grade, shall extend to a minimum of finished grade. Inspection, servicing and maintenance openings for this system shall terminate with a means that prevents entrance of deleterious materials.
- Covers for all treatment components located at, or above, grade for openings greater than eight inches in the largest dimension shall be provided with locking devices. The locking devices shall remain locked except for inspection, servicing or maintenance purposes.
- 1785** — A permanent tag or label must be affixed to this experimental system in a location that is visible after installation is complete. The tag or label shall display the following minimum information:
1. The complete name and mailing address of the owner of this system.
  2. The telephone number of the owner of this system.
  3. The unique name or model number of this system.
- 1786** — These devices must be installed with in-line flow restrictors that prevent flows that exceed the flow rates specified below:
- QRS 844 SH = 6.0 gallons per minute (gpm)
- QRS 1044 SH = 8.0 gpm
- The flow restrictors shall be installed on the inlet piping to these devices downstream of any pumps or pressure tanks.
- 1787** — These devices may not be backwashed. Backwashing of these devices will cause premature contaminant breakthrough. Therefore, if the water supply being treated contains significant amounts of particulate matter, then an approved particulate filter shall be installed upstream of these devices.
- 1789** — This device must be installed along with a performance indication device (PID). The PID installed must be the same model of PID that was evaluated under NSF International Test Report #'s 513328-03 and 513329-03.
- 1790** — This filtration system, and associated cartridges, may only be installed and used with Whirlpool Side by Side Refrigerators with a Base Grille Water Filtration System. The filtration system, and the associated cartridges, are not approved for use in any other type of Whirlpool refrigerator or refrigerators manufactured by companies other than Whirlpool.
- 1791** — The WHS-200EPA device must have a flow control installed upstream of the device such that the flow rate through the device cannot exceed 16.3 liters per minute (lpm) [4.3 gallons per minute (gpm)].
- The WHS-400EPA device must have a flow control installed upstream of the device such that the flow rate through the device cannot exceed 27.6 lpm (7.3 gpm).
- 1792** — The cumulative flow volume through these devices must be metered. The meter must be reasonably tamper proof and not able to be reset.

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- 1793** — If these devices are installed for the purposes of 2,4-dinitrotoluene and/or 2,6-dinitrotoluene reduction, then when the capacities for 2,4-dinitrotoluene or 2,6-dinitrotoluene, as defined in this letter, have been reached both the primary and secondary carbon tanks must be replaced.
- 1794** — The page entitled "Platinum Manual Insert", as received from R-Can Environmental on March 22, 2004, shall be included along with each copy of the "Sterilight ULTRAVIOLET DISINFECTION SYSTEM PLATINUM Installation, Operation and Maintenance Owner's Manual" (i.e. P/N 520066) for each sale and/or installation of these devices in Wisconsin.
- 1795** — These devices must be installed with a 254 nanometer (nm) wavelength narrow band ultra violet monitor. The monitor must energize the normally closed inlet solenoid at a minimum ultra violet dosage of 40 millijoules (mJ) at a wavelength of 254 nm.
- 1796** — These ultra violet water treatment devices conform to NSF/ANSI Standard 55, "Class A" criteria for the disinfection of microbiologically unsafe water that meets all other public health standards. This includes the inactivation of virus, bacteria and specific protozoan oocysts/cysts (i.e. cryptosporidium parvum and giardia lamblia).
- 1797** — If concerns exist about the presence of other protozoan pathogens (e.g. entamoeba histolytica, cyclosporidia, microsporidia, toxoplasma gondii, etc.), or these devices are used to treat surface water or groundwater under the direct influence of surface water, then a prefilter specifically approved for cyst reduction must be installed upstream of these devices.
- 1798** — These ultra violet water treatment devices are not intended to convert wastewater or sewage to drinking water. These systems are designed for installation on visually clear water with a minimum ultra violet transmittance (UVT) of 75% at a wavelength of 253.7 nanometers (nm)
- 1799** — The documents entitled "Performance Data Sheet" for the APS 100 and/or APS 150 models must be included with the "Operation and Maintenance Manual" (i.e. P/N 1227757 Rev. F as received by this department 03/26/04) and "Home Owner Manual (i.e. P/N 122065 Rev. A as received by this department 03/26/04) on all residential installations of these devices in Wisconsin. This information must be left with the end user of each water softener.
- 1800** — The WHAF-0335AB model, using the WHAB-6009 and WHAB-6010 cartridges, must be installed along with the flow monitoring device.
- 1801** — If the "DirectHot" unit is installed along with this filtration device, then the outlet tubing of the "DirectHot" unit must conform to at least one of the standards listed in Table 84.30-8 of ch. Comm 84.30 (4) (e) of the Wisconsin Administrative Code and have a minimum working pressure of 100 psig at 180 degrees F.
- 1802** — If the "DirectChill" and/or "DirectHot" peripheral devices are used in conjunction with this filtration device, then the power supply to these peripheral devices must be served by a ground fault circuit interrupter (GFCI) outlet.

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- 1803** — The Atlantic Ultraviolet Corp. "Ster-L-Ray" UV disinfection units used within these systems must include the "Guardian" UV monitor. The minimum failsafe dosage must be greater than or equal to 30 millijoules (i.e. 30,000 uWsec/cm<sup>2</sup>). If the minimum failsafe dosage is not being achieved, then the "Guardian" monitor shall immediately signal the programmable logic controller (PLC) to shut down the supply pump to halt the flow of water.
- A prerequisite for the use of the Atlantic Ultraviolet "Ster-L-Ray" UV disinfection units within these systems is the functional presence of ozone injection systems serving both the initial holding tanks (IHTs) and final holding tanks (FHTs).
- Fixed rate flow controls must be installed on the inlet piping to the "Ster-L-Ray" disinfection units such that the flow rates do not exceed the rated service flow rates at which the 30 mJ minimum dosages were measured.
- 1804** — Samples of the treated graywater shall be collected biannually and analysed for the following specific parameters:
1. Fecal coliform (not detected);
  2. BOD<sub>5</sub>;
  3. Oil and grease;
  4. pH;
  5. Nitrogen (organic)
  6. Total organic carbon;
  7. Volatile organics
- 1805** — If free chlorine, or hydrogen peroxide, is used to regenerate this device, then this device shall discharge regenerative effluent to municipal sanitary sewer systems only.
- If free chlorine, or hydrogen peroxide, is used to regenerate this device, then this device shall not discharge regenerative effluent to a Private Onsite Waste Treatment System (POWTS).
- 1806** — For the purposes of plumbing system sizing, and the sizing of this device, only the rated service flow rate and corresponding pressure loss shall be used. For this device the rated service flow is 5.0 gallons per minute (gpm) with a pressure loss of 4.0 pounds per square inch gauge (psig).
- 1807** — This product may not be introduced to a potable water supply system. This product may only be introduced to drain and waste systems.
- 1808** — This alternative testing protocol is valid and applicable only to the specific series of model numbers displayed on the regarding line of this letter. This alternative testing protocol may not be extended to cover other water treatment devices models.
- 1809** — Water treatment devices that pass the testing described within this approved protocol may not be used, by themselves, to treat microbiologically unsafe water or advertise claims that they perform such functions in Wisconsin.
- 1810** — If this testing protocol, as received June 3, 2004, is altered in any way, then this approval shall immediately be rendered null and void unless the change is submitted to this department for review and the approval of this protocol is reaffirmed in writing.

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- 1811** — Any test reports generated in accordance with this protocol, that are intended for submission to the State of Wisconsin, must be complete enough to determine that the complete protocol was followed. The individual directly responsible for testing must sign the final report.
- 1812** — If this testing protocol, as received June 7, 2004, is altered in any way, then this approval shall immediately be rendered null and void unless the change is submitted to this department for review and the approval of this protocol is reaffirmed in writing.
- 1813** — A copy of the stamped and approved plan for a specific installation site, along with a copy of this approval letter, must be submitted to the Plumbing Consultant of authority within the district in which the installation will occur prior to the Plumbing Consultant's final inspection, prior to system start-up. To determine the proper Plumbing Consultant to contact for a given installation site, first, determine the county of the proposed installation. Then access to following web site:

<http://commerce.wi.gov/SB/SB-PlumbingConsultantsMap.html>

Use the map to determine the district number that the pertinent county lies within. Then determine the Plumbing Consultant responsible for that district. The contact information for the Consultant is given at the bottom of the page.

- 1814** — The WHAF-0435AC model, using the WHAB-6011 cartridge, must be installed along with the flow monitoring device.
- 1815** — These devices will only reduce the concentration of volatile organic chemicals at water outlets that are served by the devices. There are dermal (skin) absorption and inhalation exposure risks associated with volatile organic chemicals. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to volatile organic chemicals will remain possible at unprotected outlets, particularly hot water outlets (e.g. bathing, showering, clothes washing or dish washing).
- If, by way of reputable water analyses, a water supply is known to contain unsafe levels of volatile organic chemicals, then all the water entering the residence must be treated at the point-of-entry using an approved water treatment device to address all potential routes of exposure.
- 1816** — The pertinent "Performance Data Sheet", as provided by Tom Leunig of GE Infrastructure, must accompany each model sold, offered for sale or installed in Wisconsin. If the "Performance Data Sheet" is not provided to the end user, then this approval shall immediately be rendered null and void.
- 1817** — These devices will only reduce the concentration of cysts/oocysts at water outlets that are served by the devices. Therefore, using point-of-use devices such as these will not protect all routes of potential exposure. Potentially hazardous exposures to cysts/oocysts will remain possible at unprotected outlets.

The presence of cysts/oocysts strongly suggests that other pathogens (e.g. bacteria, virus) may also be present.

If, by way of reputable water analyses, a water supply is known to contain cysts/oocysts, then all the water entering the residence must be treated at the point-of-entry, using an approved water treatment device, to address all potential routes of exposure thereby providing a biologically safe water supply.

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- 1818** — The ozonation devices must be installed and maintained in accordance with the manufacturer's published instructions. The ozonation devices shall be sized such that a CT value of greater than, or equal to, 1.6 is maintained at all times. "T" is the time it takes the water to move from the point where the initial disinfectant residual concentration is measured to the point where the final disinfectant residual concentration is measured in a specified disinfection segment. "C" is the measured concentration of dissolved ozone in mg/l. There shall be an ozone residual of greater than , or equal to, 0.1 mg/l after 5 minutes of contact time. All system components exposed to ozone shall be resistant to the corrosive effects of ozone. The ozonation device must be in place and functioning properly at all times when this system is in operation. Potential ozone inhalation exposure shall not exceed 0.1 mg/l (by volume) for system operators averaged over an eight-hour work shift (OSHA).

Only the model numbers with the "O" suffix (i.e. "PW100-5M12O", "PW200-5M12O", "PW200-5M24O", PW300-5M12O" and "PW300-5M24O" include the ozonation system. These specific "O" series models are approved for disinfection and odor control.

- 1819** — The air sparging devices must be installed and maintained in accordance with the manufacturer's published instructions.

Only the model numbers with the "AS" and/or "O" suffix (i.e. "PW100 FS-CS-3AS", "PW100 FS-CS-5AS", "PW100-5MAS", "PW200-5MAS", "PW300-5MAS", "PW100-5M12O", "PW200-5M12O", "PW200-5M24O", PW300-5M12O" and "PW300-5M24O" include the air sparging system. The specific "AS" series models are approved for odor control only.

- 1820** — None of these devices shall be used with the enzymatic additive. The enzymatic additive is not approved for use in Wisconsin.

This means that no model numbers with the letter "B" in the suffix shall be sold, installed or otherwise used in Wisconsin.

- 1821** — These cation exchange water softeners shall be sized, installed, programmed and maintained such that wastewater volumes, total dissolved solids and chloride discharges are minimized.

- 1822** — The 503800 and 503805 models (Pro 1 models), both using the 503803 cartridges, must be installed along with the flow monitoring device.

- 1823** — The 503801 model (Pro 2 models), using the 503804 cartridge, must be installed along with the flow monitoring device.

- 1824** — If peripheral devices are used in conjunction with this filtration device (e.g. chiller, heater), then the power supply to these peripheral devices must be served by a ground fault circuit interrupter (GFCI) outlet.

- 1825** — The deck ventilation registers must be installed so that water flowing from the surrounding pool deck will not enter the registers, but will flow to the deck drains serving the deck.

- 1826** — The deck ventilation registers must be installed so that the registers are one inch higher in elevation than the deck drain grating. This must be accomplished with a uniform sloping floor and may not create a tripping hazard.

- 1827** — The owner of the public swimming pool shall obtain approval from the Department of Health and Family Services for an alternate means of maintaining the deck. The deck maintenance requirements are in s. HFS 172.12 (1) (d), Wis. Adm. Code.

- 1828** — The entire heating system shall comply with ch. Comm 64, Wis. Adm. Code.

- 1829** — If these devices are installed for the purposes of barium and/or radium reduction, the "blending valve" shall be maintained in the fully closed position at all times.

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- 1830** — When this product is installed using the Power Drain Pump Line, the discharge piping must comply with the requirements of s. Comm 82.33 (2), (3), (4), (6), (7) and (8) of the Wisconsin Administrative Code.
- 1831** — This product is approved to use the following:
- Pipe materials constructed in conformance with Table 84.30-2 or 84.30-11, Wis. Admin. Code poured into tank cover or access cover.
  - Bottom, side and top pipe openings for pump and holding tanks.
  - Four-inch pipe connection opening in access cover.
  - Two-inch schedule 40 PVC cast in riser for electrical wiring.
  - Department approved effluent filter designed to be installed in a four-inch diameter tee with extension and installed in accordance with the product approval for the filter including a properly sized and located access opening for service and maintenance.
- 1832** — The reservoir tub fill must include a 1-11/16 inch opening to atmosphere with the top of the opening located at least 1-1/4 inches below the potable water discharge point into the reservoir.
- 1833** — A NFL 9 vacuum breaker must be installed in the water supply between the shut off valve for the cleaner disinfectant dispensing system and the cleaner disinfectant dispensing system.
- 1834** — An Alson Number 4900 vacuum breaker must be installed in the water supply between the shower shut off valve and flexible hose serving the shower wand and the shower wand.
- 1835** — Dosing of the Quanics Inc. SCAT BioFilter may be done by demand or timed controllers.
- 1836** — This product must be installed downstream of a pretreatment tank(s). The most upstream tank or compartment of the pretreatment tank(s) shall have at least 2/3 of the total liquid capacity required for the pretreatment tank(s) and shall have a Zabel model A300-8x18-VC Effluent Filter installed on its outlet. The must downstream tank or compartment of the pretreatment tank(s) shall have sufficient capacity and depth to install Quanics model ZEUS Pumping Package or other dosing system to dose the Quanics SCAT BioFilter.
- 1937** — This product may be used to joints in copper pipe, PCVC, PB or PEX piping systems.
- 2000** — Prior to installation of this product, plans and specifications must be submitted to the department or to an approved agent municipality for review and approval in accordance with s. Comm 82.20 (1) of the Wis. Admin. Code. Written approval for the plans and specifications shall be obtained prior to installation of the product.
- 2001** — This product is approved for the following uses:
- Stormwater and clearwater subsurface detention system,
  - Stormwater and clearwater subsurface infiltration system, or
  - Stormwater and clearwater subsurface detention/infiltration system
- 2002** — This product must be permanently labeled identifying the manufacturer and model number (StormTech SC-740).
- 2003** — When this product is installed as a subsurface detention/infiltration system or an infiltration system, the design and installation must be in accordance with the manufacturer's printed Design Manual (S070104HP-5) and Installation Instructions (S081203R-6), ch. Comm 82 and its Plan approval under s. Comm 82.20. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.

## APPROVAL STIPULATIONS

- 2004** — When this product is installed as a subsurface detention system, the installation must be in accordance with the manufacturer's printed Design Manual (S070104HP-5), Installation Instructions (S081203R-6), liner instructions (S140404-0) and Tech Sheet #2 (rev. 9/9/04), ch. Comm 82, plan approval under s. Comm 82.20 and product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.
- 2005** — The installation of water proof membranes must be either PVC or Linear low density polyethylene (LLDPE) material having a minimum 30 mil thickness with all seams sealed. PVC membrane seams must be sealed using solvent cement. LLDPE membrane seams must be sealed using thermal welding.
- 2006** — Inspection and maintenance of this product must be performed at intervals specified by the manufacturer (S070104HP-5) or in accordance plan approval or s. Comm 82.21, whichever is more restrictive.
- 2007** — This approval is contingent upon the fact that the term "restores" and any related derivations of the term are removed from all product literature, labeling and promotional materials that will be used with this product in Wisconsin no later than June 15, 2005.
- This approval is also contingent upon the graphic indicating no pumping required being removed from all product literature, labeling and promotional materials that will be used with this product in Wisconsin no later than June 15, 2005.
- If either of the aforementioned contingencies is not met by June 15, 2005, then this approval shall immediately be rendered null and void regardless of the circumstances. This product may not be sold, offered for sale or used in Wisconsin until the above contingencies are met.
- 2008** — When this product is installed an Isolator Row, the installation must be in accordance with the manufacturer's printed Design Manual (S070104HP-5), ch. Comm 82, plan approval under s. Comm 82.20 and product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.
- 2010** — This product must be permanently labeled identifying the manufacturer and model number (StormTech SC-310).
- 2011** — This product is approved for the following use:  
-- Stormwater and clearwater treatment for uses so listed in Table Comm 82.70-1, for subsurface infiltration.
- 2012** — When this product is installed, the installation must be in accordance with the manufacturer's printed design installation instructions Baysaver Technical & Design Manual, (March 2004), ch. Comm 82, plan approval under s. Comm 82.20, and any product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval conditions or product approval stipulations, the plan approval conditions or product approval stipulations will take precedence.
- 2013** — Inspection and maintenance of this product must be performed at intervals specified by the manufacturer as listed in Baysaver Technical & Design Manual, (March 2004), or in accordance with plan approval or s. Comm 82.21, whichever is more restrictive.
- 2014** — All manholes shall be grouted and sealed as per manufacturer's recommendations and tested for water tightness prior to operation.

## APPROVAL STIPULATIONS

- 2015** — This product has a permanent embossment that is located on the top of the bypass plate identifying the manufacturer, the city of manufacture, the year manufactured, the applicable model number and a manufacturer's unit number.  
 An example of the coding sequence is as follows: M05\*\*703F  
 Where:  
 M = city of manufacture, Mount Airy  
 05 = year of manufacture, 2005  
 \*\* = model number of separation unit, i.e., .5 = 1/2K, 01 = 1K, 03 = 3K, 05 = 5K, 10 = 10K  
 703F = the manufacturer's unit number

- 2016** — This product shall be installed with two identically-sized standard precast manholes sized in accordance with Table 3, Baysaver Technical & Design Manual, (March 2004) by size (model):

Table 3: Baysaver Separation System Storage Manhole Sizing Guidelines

Separation Unit Size	Max. Treatment Flow in cfs (gpm)	Primary Manhole Diameter (inches)	Storage Manhole Diameter (inches)
½ K	1.1 (494.00)	48	48
1K	2.4 (1076.40)	48	48
3K	7.8 (3498.30)	60	60
5K	11.1 (4978.35)	72	72
10K	21.8 (9777.30)	12	120

- 2017** — Based on studies conducted by the Univ. of Maryland using standard method 209C, for examining waste and wastewater (1986, pg. 16), this product, when designed, installed and maintained as per the manufacturer, will produce an effluent that has less than 60 mg/L TSS when the influent meets the conditions outlined in the following tables:

add 2 tables

- 2018** — This device is a bacteriostatic device.

Bacteriostatic means that this device has the ability to inhibit the growth of heterotrophic bacteria within the media bed, without destroying the bacteria. Heterotrophic bacteria are naturally occurring bacteria that are not generally a source of disease. A bacteriostatic water treatment device is designed to limit the passage or growth, or both, of heterotrophic bacteria so that the bacterial population of the product water is not larger than that of the influent water; note that a reduction in the number of heterotrophic bacteria is not required to qualify for bacteriostasis. Be advised of these crucial points:

1. This device must not be used with water that is microbiologically unsafe, or of unknown quality, without adequate disinfection before or after the unit;
2. This device will not make microbiologically unsafe water safe to consume; and
3. This device will not affect cysts, oocysts or viruses.

## APPROVAL STIPULATIONS

- 2019** — This product will produce an effluent that has less than 60 mg/L TSS for infiltration when the influent and maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Baysaver Separation Unit Model 3K.

Table 1  
Stormwater and Clearwater Treatment for  
Baysaver Separation Unit Model.3K.....

Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent	Specific Gravity of Test Material	Maintenance Interval in Months
0.46 cfs	US Silica Sand F-110	2.65	12

(This table is based on influent having 200 mg/L TSS.)

- 2021** — This product will produce an effluent that has less than 60 mg/L TSS for infiltration and 80% reduction of TSS when the influent and maintenance meets the conditions listed in Table 1, entitled StormTech Isolator Row Chamber Model SC-740.

Table 1  
StormTech Isolator Row Chamber Model SC-740

Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent	Specific Gravity of Test Material	Maintenance Interval in Years
0.5 cfs	US Silica Sand OK-110	2.65	2-4

(This table is based on influent having 200 mg/L TSS.)

- 2022** — This product will produce an effluent that has less than 60 mg/L TSS for infiltration and 80% reduction of TSS when the influent and maintenance meets the conditions listed in Table 1, entitled StormTech Isolator Row Chamber Model SC-310.

Table 1  
StormTech Isolator Row Chamber Model SC-740

Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent	Specific Gravity of Test Material	Maintenance Interval in Years
0.3 cfs	US Silica Sand OK-110	2.65	2-4

(This table is based on influent having 200 mg/L TSS.)

- 2023** — This product must be permanently labeled identifying the manufacturer and model number (StormTech SC-310).
- 2024** — The review undertaken by Commerce staff does not include review and/or approval of this submittal as meeting DNR specifications for ch. NR 151.
- 2025** — The walkway from the therapy pool or whirlpool deck to the restrooms and showers may be carpeted, however the deck surface must be composed of impervious materials as required in s. 90.09 (3). Deck surfaces are those areas that drain to deck drains for interior installations, and areas that drain to the required deck area for exterior installations.
- 2026** — The therapy pool or whirlpool patrons will be advised via signage to towel-dry prior to leaving the deck.

## APPROVAL STIPULATIONS

- 2027** — The Department of Health and Family Services may require removal of the carpeting and replacement of the carpeting with impervious material at any time in the future that maintenance is inadequate to provide a sanitary condition.
- 2028** — The maximum disinfectant residual may not exceed 0.8 mg/l (as ClO<sub>2</sub>).
- 2029** — The minimum disinfectant residual concentration must be greater than, or equal to, 0.2 mg/l (as ClO<sub>2</sub>).
- 2030** — The chlorite ion concentration may not exceed 1.0 mg/l.
- 2031** — The "CT" value is greater than or equal to 0.48 at all times.
- The "CT" value is the product of the residual disinfection concentration "C" and the corresponding disinfectant contact time "T" (i.e. "C" x "T").
- 2032** — If protozoan cysts and/or oocysts are present, or cannot be ruled out, then additional disinfection methods are required due to the extensive "CT" values required to inactivate cysts/oocysts.
- 2033** — This product submittal has been reviewed and approved for plumbing treatment standards for subsurface infiltration and irrigation using stormwater as the source, as listed in Table Comm 82.70-1.
- 2034** — This product is expected to produce an effluent that has less than 60 mg/L TSS for subsurface infiltration/irrigation with stormwater as the source when the influent (at 200 mg/L) and the maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Hydroworks, Hydroguard HG 6.

Table 1  
Stormwater and Clearwater Treatment for  
Hydroworks, Hydroguard HG6

Hydroguard Series Model a	Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent b	Specific Gravity of Test Material	Maintenance Interval in Months
HG 6	4.0 cfs	US Silica Sil-Co-Sil 106	2.65	12 or when TSS depth = 30"

a See Hydroguard Technical Manual (ver. 1.7; pg. 8 Figure 5).

b Where >90% particles are smaller than 75  $\mu$ m.

\* This table is based on influent having 200 mg/L TSS.

- 2035** — When this product is installed as a subsurface detention/infiltration system or an infiltration system, the design and installation must be in accordance with the manufacturer's printed StormChamber Installation Brochure by Hydrologic Solutions, ch. Comm 82 and its Plan approval under s. Comm 82.20. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.
- 2036** — Stone aggregate used for backfill and base must be  $\frac{3}{4}$  to 2 inch washed hard stone.

## APPROVAL STIPULATIONS

- 2037** — Fabric used for soil/stone interface between the trench walls and top of excavation must comply with the following specifications:  
Grab Tensile Strength of 90 lbs per ASTM D-4632; Grab Tensile Elongation of 50% per ASTM D4632; Mullen Burst of 225 psi per ASTM D3786; Puncture of 65 lbs per ASTM 4833; Trapezoid Tear of 45 lbs per ASTM D4533; UV Resistance of 70% per ASTM D-4355; Apparent Opening Size of 70 US Sieve per ASTM 4751; Permittivity of 2.5 Sec.-1 per ASTM D4491; and Flow Rate of 175 gal/min/sq.ft. per ASTM D 4491.
- 2038** — Minimum 8-inch diameter pipe must be used to discharge stormwater into the chambers. Additional connections across all rows of StormChambers must be made so the combined area of the connection pipes at least equal the area of the inflow storm drain pipe(s).
- 2039** — The volume of the chamber in cubic feet is at the stated liquid depth: (liquid depth in inches / cubic feet) 1.2/3.7, 2.4/7.3, 3.6/10.8, 4.8/14.3, 6.0/17.8, 7.2/21.3, 8.4/24.7, 9.6/28.0, 10.8/31.3, 12.0/34.5, 13.5/37.7, 14.4/40.9, 15.6/44.0, 16.8/47.0, 18.0, 49.9, 19.2/52.7, 20.4/55.4, 21.6/58.0, 22.8/60.6, 24.0/63.0, 25.2/65.3, 26.4/67.4, 27.6/69.4, 28.8/71.1, 30.0/72.5, 31.2/73.4, 32.4/74.1, 33.6/74.5 and 34.04/74.6.
- 2040** — The storage volume of the aggregate is calculated at 40% of the total volume of the aggregate. (i.e. 10 cubic feet of stone = 4 cubic feet of water storage)
- 2041** — Written approval for the plumbing plans shall be obtained from the department for each installation of this system. If the project is located within the city of Milwaukee, plans may be submitted to either the department or to the city of Milwaukee.
- 2044** — Labeling: The Hydroworks, Hydroguard series is permanently labeled as follows (as listed in HG Series Labeling Details, ver. 1.0):  
1) The Hydroworks logo and coding numbers are painted on the mono-base (each manhole riser); the coding indicates the project, structure ID/location and stacking sequence for installation purposes. Labels generally are painted twice on the product at 180 degrees apart.  
2) The model number is not painted on either product, but the model series corresponds to the diameter of the mono-base; for example, the Hydroguard HG-6 has a 6-ft. diameter.
- 2045** — This product must be installed in a department-approved tank that meets the design criteria for this product, as specified by Hydroworks.
- 2046** — Labeling: The Hydroworks, Hydroguard series is permanently labeled as follows (as listed in HG Series Labeling Details, ver. 1.0):  
1) The Hydroworks logo and coding numbers are painted on the mono-base (each manhole riser); the coding indicates the project, structure ID/location and stacking sequence for installation purposes. Labels generally are painted twice on the product at 180 degrees apart.  
2) The model number is not painted on either product, but the model series corresponds to the diameter of the mono-base; for example, the Hydroguard HG-4 has a 4-ft. diameter.
- 2047** — Installation-- The installation of this product shall maintain a working emergency overflow or outlet pipe. Each installation shall conform to Hydroguard Installation Instructions (ver. 1.0).

## APPROVAL STIPULATIONS

- 2048** — Maintenance: The Hydroworks, Hydroguard series maintenance is as follows (as listed in Hydroworks Hydroguard Technical Manual, ver. 1.7):
- 1) In addition to a 12-month maintenance interval for stabilized sites, inspection is provided via an access cover where TSS depth measurements maybe made after each large storm event.
  - 2) Visual inspection of floatables may be made via the access cover.
  - 3) For parking lots and stabilized sites, a 24-month interval is recommended for grease and oil removal.
  - 4) TSS and trash removal may be made using a vactor truck.
- 2049** — Inspection and maintenance of each installation of this product shall be conducted when the TSS/sediment reaches 30 inches or when floatables or oils cover > 50% surface. Anticipated maintenance intervals are 1 to 2 years.

- 2051** — This product is expected to produce an effluent that has less than 60 mg/L TSS for subsurface infiltration/irrigation with stormwater as the source when the influent (at 200 mg/L) and the maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Hydroworks, Hydroguard HG 4.

Table 1  
Stormwater and Clearwater Treatment for  
Hydroworks, Hydroguard HG4\*

Hydroguard Series Model a	Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent b	Specific Gravity of Test Material	Maintenance Interval in Months
HG 4	1.3 cfs	US Silica Sil-Co-Sil 106	2.65	12 or when TSS depth = 30"

a See Hydroguard Technical Manual (ver. 1.7; pg. 8 Figure 5).

b Where >90% particles are smaller than 75 um.

\* This table is based on influent having 200 mg/L TSS.

- 2052** — This alternate approval applies only to any number of whirlpools or therapy pools located within a single enclosure as described in Comm 90.10 (1). No other water attraction or public swimming pool may be located within the enclosure.
- 2053** — The total of the maximum posted capacities of all pools within the enclosure is ten patrons.

## APPROVAL STIPULATIONS

- 2054** — This product will produce an effluent having values for TSS and Oil & Grease as listed in Table 1, entitled Stormwater Treatment for Vortechs Model 2000, when the influent flow and loads meet the conditions of Table 1.

Table 1  
Stormwater Treatment for Vortechs Model 2000

Flow (cfs)	TSS 50-micron* (mg/l)	TSS 80-micron** (mg/l)	Oil & Grease*** (mg/l)
0.28	14	4	5
0.56	30	13	8
0.84	43	18	17
1.12	54	24	33
1.40	67	36	49
1.68	79	42	55
1.96	88	51	63
2.24	95	65	72

Note: Influent concentration of 100 mg/l

Influent mineral sediments having a density of 2.65 gram/cubic centimeter

\* Based on testing sediment particles ranging from 38-75 microns with a mean particle diameter of 50 microns

\*\* Based on testing sediment particles ranging from 38-500 microns with a mean particle diameter of 50 microns

\*\*\*\* Based on testing conducted with 10W x 40 motor oil

- 2055** — Inspection, maintenance and cleaning of this product must be performed at intervals specified by the manufacturer in Vortechs System Maintenance publication "VX.MTC.1.04.04 copywrited Vortechncs, Inc. 2004", or in accordance with plan approval or s. Comm 82.21, whichever is more restrictive.
- 2056** — When this product is installed, the installation must be in accordance with the manufacturer's printed design installation instructions, ch. Comm 82, plan approval under s. Comm 82.20, and any product approval stipulations. When there is a conflict between manufacturer's installation instructions and plan approval conditions or product approval stipulations, the plan approval conditions or product approval stipulations will take precedence.
- 2057** — Installation of this product must be in accordance with the manufacturer's printed installation instructions. A copy of the manufacturer's installation instructions must be given to the property owner, installer and submitted along with other information required by the governing agency for the installation.
- 2058** — The device(s) covered under this approval are designed to inactivate microorganisms, including bacteria, viruses, Cryptosporidium oocysts and Giardia cysts from contaminated water. The device(s) covered under this approval are not intended for the treatment of water that has obvious and/or intentional contamination source (e.g. raw sewage) nor is the device(s) intended to convert wastewater into drinking water. The device(s) are intended to be installed on visually clear water.

If this device(s) is not installed downstream of a device(s) specifically approved for cyst reduction/inactivation by this department, then protozoan related performanc claims are limited to Cryptosporidium oocysts and Giardia cysts only. If this device(s) is installed downstream of a separate devided specifically approved for cyst reduction by this department, then a general cyst reduction claim can be made when applied to untreated surface waters and/or ground waters under the direct influence of surface waters.

## APPROVAL STIPULATIONS

- 2059** — At 254 nanometers (nm), this device must deliver a minimum UV dose of 40 millijoules per square centimeter (40 mJ/cm<sup>2</sup>) at the alarm set point. 40 mJ/cm<sup>2</sup> is equivalent to 40,000 microwatt-seconds per square centimeter (4.0 x 10<sup>4</sup> uwsec/cm<sup>2</sup>).
- A normally closed (N.C.) solenoid shall be installed on the inlet piping immediately adjacent to this device. At the alarm set point, the N.C. solenoid valve shall deenergize halting the flow of water through this device.
- 2060** — A narrow band monitor shall be included with this device. The narrow band monitor shall specifically measure the 254 nanometer (nm) wavelength. When the UV dosage decrease to the alarm set point (i.e. 40 millijoule (mJ) minimum), the narrow band monitor shall signal the normally closed (N.C.) solenoid on the inlet piping to this device to close.
- 2061** — At the time of installation, these devices shall be provided with an effective means to warn the users when they are not performing their function. This shall be accomplished by one of the following:
1. sounding and alarm or flashing a light, each connected to an acceptable power source;
  2. providing a sampling kit for analysis of hardness or other appropriate contaminants; or
  3. providing a hardness monitor.
- 2062** — Piping shall be labeled with the manufacturer's name, the trade designation of the tubing, the type of material, the maximum working temperature and pressure and the mark of the certifying agency.
- 2063** — This alternate system approval pertains to 1/4-inch O.D. John Guest Linear Low Density Polyethylene (LLDPE) in natural, black, blue, orange, purple, brown, white, green, red and yellow colors.
- 2064** — This tubing shall be used on cold (i.e. less than 85 F) water distribution only.
- 2065** — Joints shall only be made in accordance with the tubing manufacturers published instructions.
- 2068** — The minimum bending radius for this tubing is one-inch.
- 2069** — The friction loss for this tubing is 24 pounds per square inch gauge (psig) per 100 feet (ft.) at 1.0 gallon per minute (gpm).
- 2070** — This tubing shall only be installed to serve plumbing appliances and devices that demand/provide less than, or equal to, one gallon per minute at each outlet.
- 2071** — The maximum length of tubing installed shall be 250 feet.
- However, the maximum length of tubing installed may be less than 250 feet if the initial water pressure is not sufficient to deliver a minimum of 8 psig water pressure, or the minimum demand of the appliance or device, at the outlet of the tubing.
- 2072** — This alternate system approval is limited to a maximum of sixty (60) dialysis stations. The dialysis units themselves must be approved as a health care plumbing appliance as required by s. Comm 84.10
- 2073** — The alternate system covered by this approval begins at the inlet of the water distribution system which solely serves the 510K systems covered by this approval.
- 2074** — All piping used within this alternate system shall be installed on cold (i.e less than 85 degrees F) water supplies only.
- 2075** — This alternate system shall be installed by properly licensed Wisconsin plumber as described in Chapter 145 of Wisconsin State Statute.

## APPROVAL STIPULATIONS

- 2076** — If PVC pipe is used to construct this alternate plumbing system, then the PVC pipe shall conform to ASTM D1785, ASTM D2241 or AWWA C900. The fittings used to join the PVC pipe shall conform to ASTM D2464, ASTM D2466, ASTM D2467, ASTM D3311, ASTM F409, ASTM F1336 or ASTM F1866.
- 2077** — If CPVC pipe is used to construct this alternate plumbing system, then the CPVC pipe shall conform to ASTM D2846, ASTM F441/F441M or ASTM F442/F442M. The fittings used to join the CPVC pipe shall conform to ASTM F437, ASTM F438 or ASTM F439.
- 2078** — If polypropylene pipe is used to construct this alternate plumbing system, then the polypropylene pipe shall meet the dimensional tolerances of ASTM D2447 and be fabricated of a resin conforming to ASTM D4101 (Type I or Type II) . The joints used to join the polypropylene pipe shall conform to ASTM D2657.
- 2079** — If PVDF pipe is used this alternate plumbing system, then the PVDF pipe shall meet the dimensional tolerances of ASTM D2447 and be fabricated of a resin conforming to ASTM D3222. The joints used to join the PVDF pipe shall conform to ASTM D2657.
- 2080** — All piping used within this alternate plumbing system shall be supported at four foot intervals in the vertical and horizontal directions.
- 2081** — All piping shall be labeled with the following minimum information:
1. The manufacturer's name;
  2. The trade designation;
  3. The type of material;
  4. The maximum working temperature and pressure; and
  5. The mark of the certifying agency.
- 2082** — This alternate plumbing system is subject to plan review as required by s. Comm 82.20.
- If a reduced pressure zone (RPZ) cross connection control device is installed as part of this alternate system, then the RPZ is subject registration and annual testing as required by s. Comm 82.20.

## APPROVAL STIPULATIONS

**2083**

This product is expected to produce an effluent that has less than 60 mg/L TSS for subsurface infiltration/irrigation with stormwater as the source when the influent (at 200 mg/L) and the maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Hydroworks, Hydroguard HG 8.

Table 1  
Stormwater and Clearwater Treatment for  
Hydroworks, Hydroguard HG8\*

Hydroguard Series Model a	Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent b	Specific Gravity of Test Material	Maintenance Interval in Months
HG 8	8.0 cfs	US Silica Sil-Co-Sil 106	2.65	12 or when TSS depth = 30"

a See Hydroguard Technical Manual (ver. 1.7; pg. 8 Figure 5).

b Where >90% particles are smaller than 75  $\mu$ m.

\* This table is based on influent having 200 mg/L TSS.

**2084**

This product is expected to produce an effluent that has less than 60 mg/L TSS for subsurface infiltration/irrigation with stormwater as the source when the influent (at 200 mg/L) and the maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Hydroworks, Hydroguard HG 10.

Table 1  
Stormwater and Clearwater Treatment for  
Hydroworks, Hydroguard HG10\*

Hydroguard Series Model a	Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent b	Specific Gravity of Test Material	Maintenance Interval in Months
HG 10	14.0 cfs	US Silica Sil-Co-Sil 106	2.65	12 or when TSS depth = 30"

a See Hydroguard Technical Manual (ver. 1.7; pg. 8 Figure 5).

b Where >90% particles are smaller than 75  $\mu$ m.

\* This table is based on influent having 200 mg/L TSS.

## APPROVAL STIPULATIONS

**2085**

This product is expected to produce an effluent that has less than 60 mg/L TSS for subsurface infiltration/irrigation with stormwater as the source when the influent (at 200 mg/L) and the maintenance meets the conditions listed in Table 1, entitled Stormwater and Clearwater Treatment for Hydroworks, Hydroguard HG 12.

Table 1  
Stormwater and Clearwater Treatment for  
Hydroworks, Hydroguard HG 12\*

Hydroguard Series Model a	Maximum Flow in cu. ft./sec.	Suspended Solid Equivalent b	Specific Gravity of Test Material	Maintenance Interval in Months
HG 12	14.5 cfs	US Silica Sil-Co-Sil 106	2.65	12 or when TSS depth = 30"

a See Hydroguard Technical Manual (ver. 1.7; pg. 8 Figure 5).

b Where >90% particles are smaller than 75  $\mu$ m.

\* This table is based on influent having 200 mg/L TSS.

**2086**

Labeling: The Hydroworks, Hydroguard series is permanently labeled as follows (as listed in HG Series Labeling Details, ver. 1.0):

- 1) The Hydroworks logo and coding numbers are painted on the mono-base (each manhole riser); the coding indicates the project, structure ID/location and stacking sequence for installation purposes. Labels generally are painted twice on the product at 180 degrees apart.
- 2) The model number is not painted on either product, but the model series corresponds to the diameter of the mono-base; for example, the Hydroguard HG-10 has a 10-ft. diameter.

**2087**

Labeling: The Hydroworks, Hydroguard series is permanently labeled as follows (as listed in HG Series Labeling Details, ver. 1.0):

- 1) The Hydroworks logo and coding numbers are painted on the mono-base (each manhole riser); the coding indicates the project, structure ID/location and stacking sequence for installation purposes. Labels generally are painted twice on the product at 180 degrees apart.
- 2) The model number is not painted on either product, but the model series corresponds to the diameter of the mono-base; for example, the Hydroguard HG-12 has a 12-ft. diameter.

**2088**

Labeling: The Hydroworks, Hydroguard series is permanently labeled as follows (as listed in HG Series Labeling Details, ver. 1.0):

- 1) The Hydroworks logo and coding numbers are painted on the mono-base (each manhole riser); the coding indicates the project, structure ID/location and stacking sequence for installation purposes. Labels generally are painted twice on the product at 180 degrees apart.
- 2) The model number is not painted on either product, but the model series corresponds to the diameter of the mono-base; for example, the Hydroguard HG-8 has a 8-ft. diameter.

**2089**

This product must conform to American Association of State Highway and Transportation Officials (AASHTO) standard M36/M 36M-98, ASTM A 760 or A 760M-95b.

## APPROVAL STIPULATIONS

- 2090** — When this product is installed as a subsurface detention/infiltration system or an infiltration system, the design and installation must be in accordance with the manufacturer's printed Water Detention/Recharge Systems brochure BRO-SWDR-2 09/02M MC, Installation Manual for Corrugated Steel Pipe published by National Corrugated Steel Pipe Assoc. publication 08 InstallMan00, ch. Comm 82 and its Plan approval under s. Comm 82.20. When there is a conflict between manufacturer's installation instructions and plan approval or product approval stipulations, the plan approval or product approval stipulations will take precedence.
- 2091** — Inspection, maintenance and cleaning of this product shall be performed at intervals specified by the manufacturer in accordance with ADS Product Note 3.140 (current edition) and HDPE Water Quality Unit Specifications (undated); see also [www.ads-pipe.com](http://www.ads-pipe.com). In the first year of operation, quarterly inspection of the sediment and oils chambers shall be inspected. At a minimum the unit shall be cleaned when the sediment volume has reached 20%, at least annually to provide peak performance; as per ADS Quality Unit Maintenance Guidelines (undated), or in accordance with plan approval or s. Comm 82.21, whichever is more restrictive.
- 2093** — Water tightness: All joints and seals shall perform to pressures up to 30 feet, in accordance with ASTM F477 and AASHTO M294.
- 2094** — Labeling: The ADS series are permanently labeled as follows and located as listed below:  
 Example: 3620 WQA/WQB XX  
 Where: 36 = inside diameter of modified sections of corrugated HDPE pipe, N-12  
 20 = the length in feet of the sectioned corrugated HDPE pipe, N-12 (also 40 ft. length)  
 WQA = are units having larger outlet diameters, allowing larger flows; designed to remove up to #140 sieve particles  
 WQB = are units having smaller diameter outlets, allowing smaller flows; designed to remove up to #200 sieve particles  
 XX = diameter of the bypass
- 2095** — This product will produce an effluent having concentration values for TSS as listed in Table ADS-1, when the influent flow and loads meet the conditions as specified.

Table ADS- 1  
 Stormwater and Clearwater Treatment  
 Minimum Sediment Removal by ADS 6020/6040WQA/WQB  
 By Flow (in cfs) and TSS Influent Test Material

Flow Rate (cfs)	TSS Influent Equivalent Test Material*	Adjusted+ TSS Influent in mg/L	Adjusted + TSS Effluent in mg/L.....
1.0	F-95 Sand	345.3	27.4
1.0	OK-110 Sand	349.1	28.4
1.25	OK-110 Sand	200.0	37.3
1.25	OK-110 Sand	167.7	36.0
1.25	OK-110 Sand	440.6	36.9
1.25	OK-110 Sand	260.0	18.9
1.5	OK-110 Sand	247.5	67.1
1.5	OK-110 Sand	247.5	28.5
1.5	OK-110 Sand	177.0	21.8
1.5	F-95 Sand	311.3	42.4
2.0	F-95 Sand	316.7	91.2

\* Specific gravity of test material = 2.65.

+ Adjusted geometric mean and use of scaling coefficient by model for effluent concentrations.

## APPROVAL STIPULATIONS

- 2096** — This product will produce an effluent having concentration values for Oil & Grease as listed in Table ADS-2, when the influent flow and loads meet the conditions as specified.

Table ADS- 2  
Stormwater and Clearwater Treatment  
Minimum Oil Removal Efficiencies and Concentrations  
by Flow Rate an Influent Concentration  
For ADS 60WQA/WQB and 60WQA/WQB

Flow Rate	0.5 cfs	1.0 cfs	1.5 cfs	2.0 cfs
	Influent Oil Concentration			
	100 mg/L	50 mg/L	50 mg/L	50 mg/L
Oil removal Efficiency +	95%	87%	80%	57%
Effluent Oil Concentration +	5 mg/L	65 g/L	10 mg/L	21.5 mg/L

+ Adjusted effluent removal and concentrations reflect scaling coefficient for effluent values.

- 2097** — This product will produce an effluent having concentration values for TSS as listed in Table ADS-1, when the influent flow and loads meet the conditions as specified.

Table ADS- 1  
Stormwater and Clearwater Treatment  
Minimum Sediment Removal by ADS 3620/3640WQA/WQB  
By Flow (in cfs) and TSS Influent Test Material

Flow Rate (cfs)	TSS Influent Equivalent Test Material*	Adjusted+ TSS Influent in mg/L	Adjusted + TSS Effluent in mg/L
1.0	F-95 Sand	345.3	24.7
1.0	OK-110 Sand	349.1	25.6
1.25	OK-110 Sand	200.0	33.6
1.25	OK-110 Sand	167.7	32.4
1.25	OK-110 Sand	440.6	33.2
1.5	OK-110 Sand	247.5	25.7
1.5	OK-110 Sand	177.0	21.8
1.5	F-95 Sand	311.3	38.2
2.0	F-95 Sand	316.7	82.1

\* Specific gravity of test material = 2.65.

+ Adjusted geometric mean and use of scaling coefficient by model for effluent concentrations.

## APPROVAL STIPULATIONS

- 2098** — This product will produce an effluent having concentration values for Oil & Grease as listed in Table ADS-2, when the influent flow and loads meet the conditions as specified.

Table ADS- 2  
Stormwater and Clearwater Treatment  
Minimum Oil Removal Efficiencies and Concentrations  
by Flow Rate an Influent Concentration  
For ADS 3620WQA/WQB and 3640WQA/WQB

Flow Rate	0.5 cfs	1.0 cfs	1.5 cfs	2.0 cfs
	Influent Oil Concentration			
	100 mg/L	50 mg/L	50 mg/L	50 mg/L
Oil Removal Efficiency +	86%	78%	72%	51%
Effluent Oil Concentration +	14 mg/L	11 mg/L	14 mg/L	24.5 mg/L

+ Adjusted effluent removal and concentrations reflect scaling coefficient for effluent values.

- 2099** — This product will produce an effluent having concentration values for TSS as listed in Table ADS-1, when the influent flow and loads meet the conditions as specified.

Table ADS- 1  
Stormwater and Clearwater Treatment  
Minimum Sediment Removal by ADS 4220/4240WQA/WQB  
By Flow (in cfs) and TSS Influent Test Material

Flow Rate (cfs)	TSS Influent Equivalent Test Material*	Adjusted+ TSS Influent in mg/L	Adjusted + TSS Effluent in mg/L.....
1.0	F-95 Sand	345.3	26.4
1.0	OK-110 Sand	349.1	27.4
1.25	OK-110 Sand	200.0	35.9
1.25	OK-110 Sand	167.7	37.4
1.25	OK-110 Sand	440.6	35.6
1.25	OK-110 Sand	260.0	18.2
1.5	OK-110 Sand	247.5	27.5
1.5	OK-110 Sand	177.0	21.0
1.5	F-95 Sand	311.3	40.1
2.0	F-95 Sand	316.7	87.9

\* Specific gravity of test material = 2.65.

+ Adjusted geometric mean and use of scaling coefficient by model for effluent concentrations.

## APPROVAL STIPULATIONS

- 2100** — This product will produce an effluent having concentration values for Oil & Grease as listed in Table ADS-2, when the influent flow and loads meet the conditions as specified.

Table ADS- 2  
Stormwater and Clearwater Treatment  
Minimum Oil Removal Efficiencies and Concentrations  
by Flow Rate an Influent Concentration  
For ADS 4220WQA/WQB and 4240WQA/WQB

Flow Rate	0.5 cfs	1.0 cfs	1.5 cfs	2.0 cfs
	Influent Oil Concentration			
	100 mg/L	50 mg/L	50 mg/L	50 mg/L
Oil Removal Efficiency +	92%	84%	77%	55%
Effluent Oil Concentration +	8 mg/L	8 mg/L	11.5 mg/L	22.5 mg/L

+ Adjusted effluent removal and concentrations reflect scaling coefficient for effluent values.

- 2101** — This product will produce an effluent having concentration values for TSS as listed in Table ADS-1, when the influent flow and loads meet the conditions as specified.

Table ADS- 1  
Stormwater and Clearwater Treatment  
Minimum Sediment Removal by ADS 4820/4840WQA/WQB  
By Flow (in cfs) and TSS Influent Test Material

Flow Rate (cfs)	TSS Influent Equivalent Test Material*	Adjusted+ TSS Influent in mg/L	Adjusted + TSS Effluent in mg/L.....
1.0	F-95 Sand	345.3	26.4
1.0	OK-110 Sand	349.1	27.4
1.25	OK-110 Sand	200.0	35.9
1.25	OK-110 Sand	167.7	37.4
1.25	OK-110 Sand	440.6	35.6
1.25	OK-110 Sand	260.0	18.2
1.5	OK-110 Sand	247.5	27.5
1.5	OK-110 Sand	177.0	21.0
1.5	F-95 Sand	311.3	40.1
2.0	F-95 Sand	316.7	87.9

\* Specific gravity of test material = 2.65.

+ Adjusted geometric mean and use of scaling coefficient by model for effluent concentrations.

## APPROVAL STIPULATIONS

- 2102** — This product will produce an effluent having concentration values for Oil & Grease as listed in Table ADS-2, when the influent flow and loads meet the conditions as specified.

Table ADS- 2  
Stormwater and Clearwater Treatment  
Minimum Oil Removal Efficiencies and Concentrations  
by Flow Rate an Influent Concentration  
For ADS 4820WQA/WQB and 4840WQA/WQB

Flow Rate	0.5 cfs	1.0 cfs	1.5 cfs	2.0 cfs
	Influent Oil Concentration			
	100 mg/L	50 mg/L	50 mg/L	50 mg/L
Oil removal Efficiency +	92%	84%	77%	55%
Effluent Oil Concentration +	8 mg/L	8 mg/L	11.5 mg/L	22.5 mg/L

+ Adjusted effluent removal and concentrations reflect scaling coefficient for effluent values.

- 2130** — Labeling: This product is labeled along the stripe on the product in the middle of the unit with the model number, customer name and quote number using a paint marker. The product is also labeled using a hot stamp to identify the manufacturing plant, year and month of when the product was manufactured.
- 3000** — The pools shall be drained in accordance with the schedule proposed in the plan submittal.
- 3001** — Both vacuum sensor switches shall be tested whenever the pools are drained. The test shall be run by intentionally closing the outlets from the pool. The test is successful if the vacuum switch cuts the power to the corresponding pump.
- 3002** — Operation, maintenance, testing and reporting instructions shall be posted at the installation prior to final inspection sign off.
- 3003** — A record shall be kept of all tests and maintenance performed. The record shall be available to Department of Commerce or Department of Health and Family Services personnel or agents.
- 3004** — A record shall be kept of any injuries sustained while using the hot or cold pool. The record shall be available to the Department of Commerce or Department of Health and Family Services personnel or agents.
- 3005** — The records required for this experiment shall be submitted to the Department of Commerce and the Department of Health and Family Services by July 1, 2006.
- 3006** — The experiment is designed to evaluate code equivalence for the following items:
1. Drains located in the side of the pool basin.
  2. Vacuum cartridge filters and their effectiveness.
  3. Transfer walls located at an elevation proposed to be appropriate for a basketball team.
  4. The draining schedule proposed by the designer.
  5. The cyanuric acid accumulation in small cold and hot vessels.
  6. If the opportunity arises, the rescue appropriateness of the reduced and elevated deck.
- 3007** — If at any time the pool operator fails to comply with the requirements of this approval, experiment shall be discontinued immediately.
- 3008** — This experimental approval expires on June 15, 2006. At that time the pools shall be made code compliant prior to their use.

## APPROVAL STIPULATIONS

- 3009** — This alternate system approval pertains only to the alternate piping materials used within the 510K system.
- 3010** — The intention of this approval is to allow the maximum length of a fixture supply connector to exceed 10 feet (ft.) in developed length as specified by s. Comm 82.40 (7) (h) 2. This approval does not relieve the installer from the sizing requirements of s. Comm 82.40 (7). The minimum water pressure at the end of the installed tubing must be 8 pounds per square inch gauge (psig), or the minimum pressure required by the appliance or device, whichever is greater.
- 3011** — The CWR-65DXP and CWR-100DXP devices must each have a conspicuous label, which is visible after installation, that displays the model number of the respective device.
- 3012** — The concentration (C) in mg/l multiplied by time (T) in minutes = the CT value for the ozonation process. These CT values vary with the temperature of the water to be treated and the minimum required CT values are as follows:

Temperature (F)	34	41	50	59	68	77+
Ozone CT Value	2.9	1.9	1.4	0.95	0.72	0.48

CT values between the indicated temperature may be determined by linear interpolation. If no interpolation is used, then use the CT value at the lower temperature for determining the CT value between indicated temperatures.

- 3013** — The pressure loss for any single mechanical filtration device shall not exceed 15 psig over and above the pressure loss of the mechanical filtration device when initially backwashed and settled. If the pressure loss exceeds 15 psig, then the mechanical filtration devices must be backwashed, serviced or replaced.

Each individual pressure vessel installed in series or parallel is considered a separate and distinct mechanical filtration device.

- 3014** — The interceptors/separators used in this system shall have an individual capacity of 1,650 gallons. The interceptors/separators shall be prefabricated by Green Acres. The interceptors/separators shall be designed, constructed and installed in accordance with the product approval issued for these tanks under Wisconsin Product File No. 20050297.

The site constructed holding tanks were not considered under this approval because they do not contribute to the treatment of wastewater.

- 3015** — This system approval includes the consideration of the CATEC CWR-35DXP and CATEC CWR-100DXP skid mounted treatment units (including the mechanical filtration devices, the particle separators and ozone generator) and the interceptors/separators.

- 3016** — The final effluent, collected from at or near the suction basket of the final interceptor/separator/sump, shall be sampled semiannually for the following water quality parameters:

1. pH;
2. 5-Day biological oxygen demand (BOD5);
3. total suspended Solids (TSS);
4. fecal coliform

The results of these semiannual test shall be submitted as directed by the reviewer of the site specific plan.

## APPROVAL STIPULATIONS

- 3017** — Operation of this/these device(s) and flow rates above the rated service flow rates indicated within this approval letter are not supported or acknowledged by this approval. The rated service flow rate(s) is/are the flow rate(s) at which this/these device(s) were tested.

Because the level of treatment obtained is a function of how long the water is in contact with the treatment media within this/these device(s), arbitrary increases in the flow rate(s), above the rated service flow rate(s) may compromise the quality of the treated water.

- 3018** — The department does not recommend the use of water softeners for reducing dissolved iron concentrations in excess of 3.0 mg/l. This is because applying water softeners in this way sacrifices long-term water softener performance and efficiency. The use of water softeners for reducing dissolved iron concentrations exceeding 3.0 mg/l also generates excessive, and otherwise avoidable, quantities of chloride and dissolved solids which are subsequently discharged to ground and/or surface water supplies. Once present in ground and/or surface water supplies, chloride and dissolved solids tend to remain in the water resource and may travel great distances from the original point source. Presently, there are no economically viable methods to remove chloride and dissolved solids from water supplies because available technologies generate waste streams of their own, further concentrating the problem. It has been established by the Wisconsin Department of Natural Resources that chloride is chronically toxic to representative aquatic organisms, including forage and sport fish, at 395 mg/l, and acutely toxic at 757 mg/l.

# APPROVAL STIPULATIONS

3019

TABLE 1  
CONVERSION OF WATER SUPPLY FIXTURE UNITS TO GALLONS PER MINUTE FOR  
WATER  
TREATMENT DEVICES SERVING AN INDIVIDUAL DWELLING

Water Supply Fixture Units (WSFUs)	Gallons Per Minute (GPM)
1	1
2	2
3	3
4	4
5	4.5
6	5
7	6
8	6.5
25	7
35	8
40	9

- 3021 — This approval applies to receptors that only receive discharge from refrigerated food display cases.
- 3022 — The trap size for receptors of indirect waste serving refrigerated food display cases under this alternate system shall be 2 to 4 inches.
- 3023 — The drainage fixture unit value assigned to each receptor of indirect waste serving refrigerated food display cases is two.
- 3024 — The sink serving as the receptor for the dental mold grinder shall be located within 3 feet of the grinder.
- 3025 — The sink serving as a receptor for the dental mold grinder shall be provided with a plaster trap.

## APPROVAL STIPULATIONS

- 3026** — The indirect waste piping of a dental mold grinder may discharge into the sink or to a sink branch tailpiece installed above the trap inlet. The connection shall be made by means of an air-gap or air-break.
- 3027** — The indirect waste piping serving the dental mold grinder shall not exceed a length of 36 inches.
- 3028** — This filter is approved as a bacteriostatic device.
- "Bacteriostatic" means that the filtration media within this device will not support the growth of naturally occurring bacteria. This means that under actual test conditions the number of naturally occurring bacteria coming out of the tested filter was not greater than the number of naturally occurring bacteria entering the filter.
- This does not, in any way, mean that this device will make microbiologically unsafe water safe to consume. This does not mean that this device will kill or otherwise inactivate disease causing microorganisms.
- 3030** — All sumps, and their associated ejectors and pumps, shall conform to s. Comm 82.30 (10).
- 3031** — The 30-765B and 30-765C devices must each have a conspicuous label, which is visible after installation, that displays the model number of the respective device.
- 3032** — This systems approval includes the consideration of the 30-765B and 30-765C skid mounted treatment units (including the mechanical filtration devices and ozone generator).
- 3033** — These devices are not approved for the reduction of bacterial, colloidal or organically bound forms of iron.
- The water must be tested to speciate the iron present to determine if these devices can provide adequate treatment.
- 3034** — These devices generate and discharge significant concentrations of free chlorine during each regeneration.
- This fact should be considered as part of an overall program of inspection and maintenance for private on-site waste treatment systems (e.g. septic tank).
- 3035** — These devices are not capable of being backwashed.
- Backwashing is a process during which the flow of water is reversed relative to the direction of flow during the service cycle. The purpose of backwashing is to flush particulate matter, that may have become entrained in the media bed during the service cycle, to drain and re-sort the media granules. Particulate matter that accumulates within the media beds may compromise the quality of the treated water and cause decreasing water pressure.
- Therefore, because these devices can not be backwashed, these devices shall only be installed on visually clear water, or, approved particulate filters shall be installed prior to the devices.
- 3036** — The reduced pressure principle backflow preventer (ASSE 1013 or CAN/CSA B64.4) that is included with this product must be installed on the water supply pipes serving this product.
- 4000** — The recirculating system shall be designed and installed to maintain sixty (60) gallons per minute of flow rate.
- 4001** — A copy of this approval letter must accompany each installation of this product in the State of Wisconsin.

## APPROVAL STIPULATIONS

- 4002** — This filtration system and the associated cartridges may only be installed and used with Whirlpool Side by Side Refrigerators with a Push Button In-Grille Filter. The filtration system and the associated cartridges are not approved for use in any other type of Whirlpool refrigerator or refrigerators manufactured by companies other than Whirlpool.
- 4003** — This filtration system and the associated cartridges may only be installed and used with KitchenAid Side by Side Refrigerators with a Push Button In-Grille Filter. The filtration system and the associated cartridges are not approved for use in any other type of KitchenAid refrigerator or refrigerators manufactured by companies other than KitchenAid.
- 4004** — The WS-1000D devices must each have a conspicuous label, which is visible after installation, that displays the model number.
- 4005** — The catch basin shall conform to 82.34(4)(a)2.
- 4006** — The trench drain leading to the catch basin shall conform to 82.34(4).
- 4007** — The treated water rendered by this device shall be sampled on a biannual basis. The water samples shall be collected from tank #4, while the device is recirculating water, and be analyzed for the following specific parameters:
1. pH;
  2. Biological Oxygen Demand - Five Day (BOD5);
  3. Total Suspended Solids (TSS);
  4. Fecal Coliform per 100 ml; and
  5. ozone residual concentration
- The ozone residual must be measured on-site after several intervals of contact time using Standard Method 4500-O3, or equivalent.
- The results of these tests shall be provided to the Plumbing Consultant responsible for inspection of the final installation.
- 4008** — These devices shall not be installed on water supplies with a pH of 6.5 or less.
- 4009** — This product may be used to join together copper that complies with ASTM B88.
- 4010** — The fittings must be labeled with the manufacturer's name or trade mark and fitting size.
- 4011** — This product must be installed with an "Effluent Filter Overflow Plate" as instructed by Orenco Systems.
- 4013** — Do not use this device with water that is microbiologically unsafe, or of unknown quality, without adequate point-of-entry (i.e. whole house) disinfection before this device.
- 4014** — This device is not intended for the treatment of water that has an obvious or intentional contaminant source (e.g. a well known to be microbiologically unsafe, raw sewage), nor is this device intended to convert wastewater to drinking water.